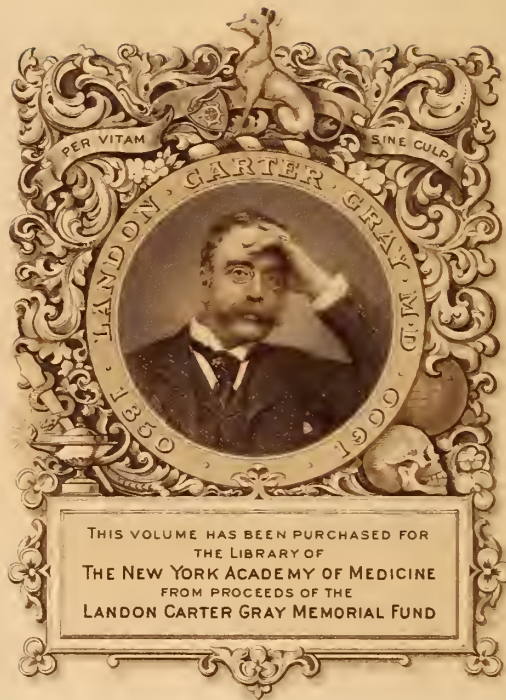




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# DEXTRI-MALTOSE

## *for Infants*

It is generally accepted by pediatricians that the ordinary sugars used in infant food mixtures are often the cause of digestive disturbances.

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*Manufacturers of Infant Diet Materials Exclusively*



# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXV

JULY, 1926

No. 1

## FURTHER FALLACIES OF THE SHEPPARD-TOWNER PROPAGANDA

By WILLIAM C. WOODWARD

Executive Secretary, Bureau of Legal Medicine and Legislation of the  
American Medical Association, Chicago

THE EDITOR—Not only the American Medical Association, but practically all other organizations of educated physicians opposed the passage of the Sheppard-Towner Law. After seeing the results of its operation, they are even more strongly opposed to its continuance, which is now being actively urged before Congress.

This not because better maternity service and improved infant welfare are not needed; not because, as is frequently charged, of danger to the selfish interests of physicians, but because it initiates and fosters the practice of a difficult specialty of personal health medicine by official public health organizations, farm bureaus, boards of education, technicians, artisans, uplifters and what-not, under the control of a lay bureau of the federal government; because one of its chief consequences is to disturb or destroy that confidential, sympathetic and necessary relationship that must exist between the patient and the physician of her choice; and because such legislation is fraught with untold dangers of many other kinds to the health, happiness and general welfare of our mothers and children.

Whatever influences combined to secure this law, they were not based on the intelligent reasoning of those best able to judge, but rather upon a dramatized emotionalism so easy to arouse by well-directed publicity.

The same influences that secured the original law, plus an army of employees now engaged in executing and expanding its provisions, are at Congress again to continue and extend the federal government's bureaucratic control over this major field of the practice of personal health medicine.

Much of the propaganda put out by proponents of this measure has been characterized by glittering generalities rather than by clear thinking and analyses of facts.

The present campaign for the continuance of the appropriation of millions for the salaries of thousands of near-doctors to continue the law is largely characterized by generalities and downright misuse of facts, as is so clearly shown by Doctor Woodward in this article.

Unless additional legislation is enacted by Congress, the pernicious Sheppard-Towner Law will die a natural death on June 30, 1927.

A bill authorizing extension of the act has passed the House. In the Senate, the Committee on Education and Labor has recommended the passage of the House Bill, but recommended that the period of the proposed extension be reduced from two years to one and that a definite date for the discontinuance of aid under the Sheppard-Towner Act be now fixed. With those recommendations the bill now awaits action by the Senate. In the meantime another bill (H. R. 10986, "A bill to repeal an act entitled 'An act for the promotion of the welfare and hygiene of maternity and infancy, and for other purposes,' approved November 23, 1921, and amendment thereto") has been introduced in the House of Representatives.

The Sheppard-Towner Act authorizes federal appropriations to stimulate and aid the states in protecting and promoting the health of mothers and infants. It denies aid, however, to every state that will not subject its activities to the supervision and control of the children's Bureau, a lay bureau in the Department of Labor, and a federal board of two laymen and one doctor.

The proponents of the Sheppard-Towner Act claim that the interest of the federal government in mothers and babies justifies it in subsidizing in their behalf state health activities and in taking over the supervision and control of them. If so, the interest of the federal government in persons of other ages obviously would justify it in providing subsidies in their behalf and in taking over the supervision and control of health work for them also.

Boys and girls, the youth of the country, and men and women of all ages are as important factors in the life of the nation as are infants and mothers. The wealth of the nation has already been expended to make them producing economic units in community life and to make them available to protect the nation in case of war. To them, the federal government must look for the care and nurture of coming generations, and even for the care and nurture of mothers and infants, on whose behalf the Sheppard-Towner Act expresses such solicitude. Obviously the federal government has an interest in youth and adults quite as great as its interest in mothers and babies. If the federal government has the power to buy from the states the right to supervise and control health activities in behalf of mothers and infants, it has the power to buy also the right to supervise and control health work for youth and adults. But if the federal government can buy from the states the right to supervision and control of state health activities, vested by the Constitution in the states, there is no reason why the federal government should not likewise buy other constitutional rights of the states. It is to that end that the Sheppard-Towner Act seems to lead. The accomplishment of that end will be coincident with the destruction of our present system of government.

Physicians and other persons who are interested in the facts about the Sheppard-Towner variety of paternalism will get them from Woodward's article in the May issue, Bulletin A. M. A., from which the above paragraph is quoted, and from the following article dealing with further fallacies of this pernicious legislation:

1. *In support of pending legislation to authorize appropriations to carry the Sheppard-Towner Act into effect for two years beyond the date originally set for it to expire, it is urged that this is merely a temporary expedient, designed to prevent the loss of the money and effort already expended under the act. The record shows, however, that is not the case. The extension of the Sheppard-Towner Act now sought, for two years only, is merely one of a series of extensions that*

*be sought if this extension be granted. In fact, proponents of the Sheppard-Towner plan regard the act as permanent legislation.*

In the report of the hearing before the Committee on Interstate and Foreign Commerce, House of Representatives, January 14, 1926, on H. R. 7555, the bill authorizing further appropriations for carrying the Sheppard-Towner Act into effect on page 51, we find the following statement by Miss Grace Abbott, Chief of the Children's Bureau:

"The committee is familiar with the fact that the legislation enacted in the maternity and infancy act is permanent; the only thing that is not permanent is the authorized appropriation for the five-year period."

In the "Congressional Record," April 5, 1926, page 6725, the same view was stated by Representative Barkley, when he spoke in support of the bill:

"My only regret is that this authorization is limited to two years. I would advise, gentlemen, of the fact that this is permanent legislation. The Sheppard-Towner Bill is a permanent law. It only provided originally for a five-year authorization of appropriations. This merely extends the authorization two years, but the law itself is permanent law. . . ."

The same view was adopted by Senator Sheppard, in the "Congressional Record," April 14, 1926, page 7254:

"As to the present status of the measure, let me add that, after consultation with the Budget Bureau and the President, the Secretary of Labor, transmitted to Congress a recommendation for the continuation of the appropriations under the maternity act for two additional years. The act itself is permanent legislation."

It could not well be made clearer that the proponents of this legislation expect to keep the Sheppard-Towner plan as a permanent part of our federal organization. But whether they do or do not plan to go that far, it is clear that they have no intention whatsoever of abandoning the scheme at the end of the two-year extension they now seek. For turning to the printed report of the hearing before the Committee on Interstate and Foreign Commerce, House of Representatives, we find the following:

"Mr. Newton. Now this further question. Do you consider that the two years is sufficient?

"Miss Abbott. Well, I do not consider it sufficient if it is to end at the two-year period. I did not think in asking that period of time that that was the intention either of the Secretary of (or) the President that there was to be no further extension after the two-year period." Page 12.

"Mr. Lea. What time would you specify for a certainty that, in your judgment, the United States should remain in this work?

"Miss Abbott. Well, I do not want to specify for a certainty.

"Mr. Lea. Do you think four years?

"Miss Abbott. No; I would rather say five as the time that the Government would without question need to continue the work.

"Mr. Lea. You are certain that the Government should stay in for five years?

"Miss Abbott. Personally, I am; yes. But I am supporting the recommendation of the Secretary and the President for the two-year period, with a view to showing accomplishments and needs still existing at the end of that time." Page 14.

"Mr. Rayburn. You would not hazard an opinion on just when you think you could recommend that the Government go out of this supervision?

"Miss Abbott. No; because I think it is a factual thing.

I am not a prophet, after all, as to when that condition may come to pass." Page 15.

With such testimony as that of Miss Abbott, the statement that has been made in support of the pending bill, that "there is no disposition to extend federal co-operation beyond the next one or two years," is certainly without foundation.

2. *Attempts to justify an extension of the life of the Sheppard-Towner Act by showing the extent of activities in the field of maternal and infant hygiene since that act was passed are inadequate unless they show the results of such activities, and this they do not do.*

"Child-health conferences," "school conferences," "infant clinics," "institutes," "public talks," "patterns distributed," "milk letters, with instructions to mothers," and similar activities ("Congressional Record," April 14, 1926, pages 7254-7272) are at best merely agencies to conserve health and life. Evidence showing only that such activities are going on does not prove that they are accomplishing that result. Such evidence is even further from proving that such activities are being conducted efficiently and economically, or that they are being conducted under the Sheppard-Towner Act better than they could have been conducted by the states alone. The evidence offered is inadequate, too, to permit intelligent judgment as to the relation of such activities to the Sheppard-Towner Act, for such evidence very generally fails to show the nature and extent of similar activities in the same jurisdictions before the act was passed.

3. *The assertions that have been made that there have been substantial reductions in infant and maternal mortality, with the implication that such reductions have been due to the Sheppard-Towner Act, are not supported by the evidence.*

In the "Congressional Record," April 5, 1926, on page 6720, in the argument of Representative Newton in support of the act, the following appears:

"Since the operation of this act there has been a substantial decrease in both the infant mortality and the maternity death rates."

Representative Newton then submits tables showing that in the three Sheppard-Towner years, 1922-1924, inclusive, the infant mortality rate for the registration area fell from 76 to 72, and the maternal mortality rate fell from 6.8 to 6.6. Such a decline could hardly be regarded as "substantial." But even if it were, it could not be accepted as an argument in favor of the Sheppard-Towner Act; for during the three years immediately preceding, namely, 1919-1921, inclusive, the infant mortality rate fell from 101 to 76, and the maternal mortality rate fell from 9.2 to 6.8. Of course we know that the improvement shown by the figures last stated was only relative and that the decline was great because of the high mortality due to influenza in the year preceding the triennium named and from which the decline is computed. But what the improvement in 1922-1924 was due to, and how long it will continue, we do not know.

As a fallacious argument offered in support of the Sheppard-Towner Bill recently passed by the House, we find the following by Representative Barkley,



in the "Congressional Record," April 5, 1926, page 6725:

"Taking the United States as a whole, in 1920, which was the year before the enactment of this law, the number of children who died in infancy amounted to 86 out of every 1000 in the United States. In 1924, four years after the passage of this law, the death rate among children in the United States had been reduced from 86 to 71 per 1000. This is a reduction of nearly 20 per cent in less than four years."

The Sheppard-Towner Act was not approved until November 23, 1921. Obviously its enactment could not have influenced the infant mortality rate for 1921. Why, then, did not Representative Barkley take the infant mortality rate for 1921 as a basis for comparison, instead of the infant mortality rate for 1920? The infant mortality rate for 1921 was 76. The decline, therefore, under the Sheppard-Towner régime was from 76 to 72. It was only 5 per cent in three years, not 20 per cent in less than four years as stated. And no evidence is offered to show that the Sheppard-Towner Act had anything to do with even such decline as did occur.

4. *Statements made to show the extent to which infant and maternal mortality are preventable, in support of an argument for the enactment of the pending legislation, are without adequate foundation.*

In the "Congressional Record," March 31, 1926, page 6434, Senator Sheppard is quoted as referring to certain studies and investigations made by the Children's Bureau as follows:

"It was found that nearly 20,000 mothers and almost 200,000 infants under 1 year of age were dying in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy."

As a matter of fact, according to the Twenty-fourth Annual Report of the Bureau of the Census, covering Mortality Statistics, 1923, published in 1926, page 126, there were in the entire registration area of the United States in 1923, only 166,274 deaths of children less than 1 year old from all causes. The estimated population of the registration area was 96,986,371, and the estimated population of the entire continental United States was only 110,663,502. (See Report cited, page 8.) And yet, unless Senator Sheppard has misinformed us, investigations by the Children's Bureau disclosed the fact that almost 200,000 infants under 1 year of age die in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy. If the reported findings of the Children's Bureau are correct, where do the extra 34,000 babies come from each year who die from lack of proper knowledge? And where do all the babies come from who die every year from other causes?

A similar discrepancy exists with respect to maternal mortality. In support of the Sheppard-Towner Act, the Children's Bureau is quoted as authority for the statement that "nearly 20,000 mothers . . . were dying in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy." And yet the report of the Census Bureau, cited above, page 176, shows that the total number of deaths in 1923 in the entire registration area, containing nearly nine-tenths of the population of the continental United States, from accidents of pregnancy and labor, and hemorrhage, blood poisoning and other conditions incident to the puerperal state, was only 15,505.

5. *Comparisons between maternal mortality in the United States and maternal mortality in other countries, to the discredit of the United States, are not justified by comparable records.*

Referring to studies and investigations made by the Children's Bureau, Senator Sheppard, according to the "Congressional Record," March 31, 1926, page 6434, said:

"Reports from the birth-registration area of the United States showed that from 1915 to 1920 the death rate of mothers from causes relating to maternity was increasing. It was shown that the death rate of mothers in the United States from these causes was the highest for any nation in the world for which recent figures could be obtained, and that seven foreign countries had infant death rates lower than the United States."

The reason for the increase in maternal mortality in 1920 as compared with maternal mortality in 1915 is not hard to find. In 1920 many expectant mothers died from influenza, and their deaths were charged to pregnancy; in 1915 influenza did not contribute to such mortality.

But probably the most overworked figures that have been used in the support of the Sheppard-Towner propaganda are such as those referred to above, purporting to show an exceedingly high maternal mortality rate in the United States as compared with the maternal mortality rates in other countries. Concerning comparisons of that kind, the Bureau of the Census has this to say:

"As already pointed out, the classification of deaths from puerperal causes differs greatly in different countries. Higher rates in one country than in another, therefore, do not necessarily mean higher mortality from these causes. However, as classification in a given country presumably differs but little from year to year, the rates do presumably serve as useful measures of mortality from these causes within the country itself.

"Comparing the rates of 1923 with those of 1915 for puerperal septicemia, the United States shows the same rate for both years, England and Wales a reduction of 13.3 per cent in its rate, Australia an increase of 30.8 per cent, New Zealand an increase of 137.5 per cent, and Scotland the same rate for both years. For other puerperal causes, the United States shows an increase of 5.4 per cent, England and Wales a decrease of 7.4 per cent, Australia an increase of 17.2 per cent, New Zealand a decrease of 15.4 per cent, and Scotland an increase of 7.1 per cent." Twenty-fourth Annual Report, Bureau of the Census, Mortality Statistics, 1923, published in 1926, page 64.

Just what comfort Sheppard-Towner propagandists can get out of these figures is hard to see.

6. *Even if it could be admitted that infant and maternal mortality rates were as bad as the proponents of the pending legislation assert, and that it is as easily reducible as some of them claim, there is no evidence to show that preventive measures can be applied more effectively by the federal government than by the state.*

So far as is known, not a single advance in methods for preventing infant and maternal mortality has been made by the Children's Bureau since the Sheppard-Towner Act was passed. It has merely adopted methods devised and in use by the several states and cities of the country. Obviously supervision and control of such activities over the entire land area of the United States, approximately 3,000,000 square miles, by a federal bureau in Washington, must entail a heavy overhead expense, or must be supervision and control on paper only.

Approved by the Executive Committee of the California Medical Association, June 19, 1926.

## OUR PRESENT CONCEPTION OF ESSENTIAL HYPERTENSION †

By ROY E. THOMAS \*

ANY condition, the etiology of which is in doubt, is always a live topic. Add to unknown etiology, a steadily increasing incidence, and a mortality almost equal to that of any infectious disease, not excepting tuberculosis, and we have everything necessary to stimulate the keen interest of all students of medicine. Since Sir Clifford Allbutt first described the malady which he then called hyperpiesis, the rank and file of the profession have gradually come to recognize this condition as a clinical entity. Articles appeared from time to time in the medical journals, and as the importance of the subject became increasingly evident numerous theories concerning etiology, reports of experimental work and recommendations for therapy, resulted in confusing, rather than clarifying, the conception of hypertension for the average reader.

It is my intention to discuss briefly: (1) the theories concerning the etiology of this disease which to my mind merit consideration; (2) its pathology, including the relation it bears to arteriosclerosis, heart failure and the condition known as chronic nephritis; (3) clinical features and management, particularly prophylaxis based on our latest conceptions of etiology.

*Etiology*—It is probable that blood pressure may be raised by (1) increased heart action; (2) increased quantity or viscosity of the blood; and (3) increased resistance in the peripheral blood vessels.

As early as 1862, Bezold<sup>1</sup> showed that stimulation of the accelerator nerve increased blood pressure, not by causing tachycardia, but by exciting the vasomotor center. Numerous experimenters have demonstrated that increased heart rate does not increase blood pressure as long as the regulating mechanism of the vasomotor system is intact. Of greater significance than the heart rate is the increased amplitude of the heart beat. Such an increase might be the result of direct stimulation of the heart muscle by toxins or chemical substances circulating in the blood stream. Increased output of the heart is probably not a factor in causing high blood pressure because of the compensating mechanism just mentioned.

The theory that increased viscosity of the blood causes high blood pressure was advanced by Ewald<sup>2</sup>. In favor of such a view is the fact that in erythremia there is a greatly increased viscosity of the blood with a normal or slightly increased volume output, and in many cases the blood pressure is elevated. Also the pressure lowering action of iodine salts (if

such exists) is possibly due to their action in decreasing the viscosity of the blood.

Can increased volume of blood cause high blood pressure? Most physiologists say not and support their stand by animal experimentation.

According to Tigerstedt,<sup>3</sup> enormous quantities of blood have been transfused with slight or very transient increase in blood pressure. The plethora is cared for by transudation into the tissues or more likely by a vasomotor protective or regulating mechanism which, according to Fazzani,<sup>4</sup> must be located in the periphery, since it is effective after section of the spinal cord. So much for increased heart force and changes in the volume or composition of the blood. It is pretty generally accepted that they are at the most very minor and transient factors in the cause of increased blood pressure.

This leaves only increased resistance in the peripheral vessels as the chief etiological factor in the mechanics of hypertension. While students of the problem generally agree that increased peripheral resistance is the cause of high blood pressure there are many opinions as to just what causes this increased resistance; is it spasm, lessened elasticity, or pressure from without the vessel wall as in edema, or increased intra-abdominal pressure? Little can be said in favor of external pressure as a cause of increased peripheral resistance. No more conclusive is the evidence in favor of the mechanical theory, the advocates of which hold that a primary contraction of the kidney is the chief factor in causing peripheral resistance. If merely a local narrowing of the arterial tree could cause high blood pressure we should see it in all cases of Renaud's disease and endarteritis obliterans. Loss of elasticity in the vessel walls as the cause of high blood pressure can be dismissed with a word. The frequency of advanced generalized arteriosclerosis associated with normal or low blood pressure is well known. Kahler<sup>5</sup> believes that the greatest factor in the cause of high blood pressure is a general contraction of the precapillary arterioles, a disorder of the motor control of the blood vessel musculature. *This* is the theory which seems to fit in best with clinical observation and recent experimental work.

If we accept this theory of the mechanics of high blood pressure we have yet to explain the factors back of this loss of vasomotor equilibrium. To account for it many interesting hypotheses have been advanced, the most plausible of which are: (1) reflex—due to some peripheral, visceral or central stimulation, the latter possibly psychic in nature; (2) chemical—due to the presence in the blood of normal products of metabolism like guanadin or glucose in increased amounts as in hyperglycemia or abnormal products of metabolism or toxins reaching the circulation from the intestinal tract; (3) endocrine—through hyperactivity of the adrenals or pituitary glands or hypofunction of the gonads; (4) hereditary—either by direct transmission of some constitutional anomaly or special susceptibility to environmental factors.

It seems improbable that any one of these four hypotheses will explain all cases of chronic hypertension. Barker<sup>6</sup> has recently expressed his opinion

† Address as chairman, Section on General Medicine, 1926 Session, California Medical Association, Oakland.

\* Roy E. Thomas (1136 West Sixth Street, Los Angeles). M. D. Rush Medical College, 1907. B. S. Pomona College, 1903. Graduate Study: U. S. Indian School Hospital, 1909; Massachusetts Gen. Hospital, 1915; Stanford University Hospital, 1917; Univ. Coll. Hospital, London, 1925. Previous Honors: Captain, M. C., U. S. A. Present Hospital Connections: Sr. Medical Service, Los Angeles General Hospital; Hospital of the Good Samaritan; Hollywood Hospital. Scientific Organizations: American Medical Association; California Medical Association and Los Angeles Medical Association. Present Appointments: Major, M. R. C., U. S. A. Practice limited to Internal Medicine since 1915. Publications: Syphilitic Aortitis (Southwestern Medicine); Infectious Jaundice (Southwestern Medicine).



as follows: "That the causes (of hypertension) be partly in the germ plasm and partly in environmental influences, seems certain. The tendency of essential hypertension to occur in families as well as its incidence among persons of certain types of constitutional make-up (those with vasopathic, neuropathic and endocrinopathic inferiorities) point to a predisposition that is genotypically determined." As possible environmental factors, he mentions infectious processes, chronic intoxication, dietetic errors and exposure to stress and strain, mental or physical.

Heredity is without doubt the greatest single factor in the etiology of hypertension. Common habits and environment will hardly account for the high rate of incidence in certain families such as the one reported by Rosenbloom<sup>7</sup> in which both father and mother died of cerebral hemorrhage at forty-five and eight of ten children had marked hypertension before the age of fifty. The records of any medical clinic will furnish similar instances. O'Hare<sup>8</sup> has found a family history of vascular disease in 68 per cent of 300 cases of hypertension compared with 37.5 per cent in controls. Barach<sup>9</sup> found a positive history of cardiovascular disease in all but two of forty cases of chronic hypertension observed by him. He considers the factor of heredity the most prominent one in the hypertension group. He also considers acute infections a factor in as much as they bring about endocrine disturbances and neuro-circulatory asthenia. In an unselected series of 100 cases of chronic hypertension observed by the writer 65 per cent had a family history of cardiovascular disease. In an equal number of controls such a history was obtained in only 32 per cent.

In addition to certain physical characteristics (sthenic habitus), which seems to be prevalent in these families in which hypertension is prone to occur, I believe that there is a more or less characteristic mental make-up or disposition. These individuals are intense in everything they do. They worry without showing it. They cannot relax. If they play they do so with such concentration and effort that it really amounts to work.

As has been pointed out by Kylin<sup>10</sup> there are certain resemblances between hypertension and the disease of which bronchial asthma is a manifestation; both are hereditary, both occur in neurotic individuals with abnormally sensitive vegetative nervous systems, and both are characterized by spasms of involuntary muscle fibers—in the arterial wall in one case, and in the bronchial wall in the other.

*Pathology*—Fishberg<sup>11</sup> has described the arterial changes found in seventy-two cases of chronic hypertension which came to autopsy. Typical lesions occurred in the arterioles. These changes were most frequent and most marked in the kidney and consisted of: (1) hyalinization of afferent arteries beginning close to the junction with the glomerular tuft; (2) hyperplasia of the internal elastic membrane with reduplication and formation of multiple lamellae; (3) reactive proliferation of the neighboring connective tissue resulting in marked narrowing of the lumen which may go on to obliteration. The vessels of the spleen, liver, pancreas and brain are involved to less extent while those of the skin,

striated muscle, gastro-intestinal tract and heart apparently escape.

The gross changes which occur late in chronic hypertension are so well known as to require only brief mention. They consist chiefly of more marked renal changes, sclerosis of the larger arteries, cardiac hypertrophy and retinal or cerebral hemorrhages. It is upon these secondary changes that most of the symptoms of hypertension depend.

#### CLINICAL CONSIDERATION

Hypertension of comparatively short duration and obvious cause such as occurs in acute nephritis, toxemia of pregnancy, hyperthyroid states or as the result of intracranial lesions is not within the scope of this paper. In these conditions the hypertension is merely a symptom having no more significance than fever in infectious diseases. Kahler<sup>12</sup> has attempted an elaborate classification of chronic hypertension based upon pathogenesis, clinical manifestations and response to certain drugs, venesection and lumbar puncture. Inasmuch as many cases fail to conform to this classification it seems unwise to urge its general adoption lest it add to the confusion already existing.

The chief point under discussion at this time seems to be the relation of hypertension to chronic nephritis. Chronic nephritis may be divided into two types; one with edema, the other without edema (Christian.<sup>13</sup>) In the first type high blood pressure often occurs but is frequently absent. The glomeruli are chiefly affected and the disease usually may be traced to some infection. In the second type (without edema) high blood pressure is constant, the lesions in the kidney are chiefly vascular and proliferative, and no constant etiological factor has been demonstrated unless it be a pre-existing hypertension. Occasionally a case of clear cut hypertension is seen which can be followed through the gradual changes characterized by fixation of specific gravity of the urine, retention of sodium chloride and nitrogen until finally cerebral hemorrhage, heart failure or uremia end the picture. Who can deny that all cases of essential hypertension might not follow this course if they were not terminated by cardiac failure or cerebral hemorrhage before renal function became greatly affected?

The relation of hypertension to chronic heart disease is generally recognized and needs little comment. Janeway<sup>14</sup> has said that no large reduction of the mortality from circulatory diseases is likely until the problems of hypertension and rheumatism have been solved. In a series of 250 cases of myocardial insufficiency, he found the largest group (36 per cent) due to hypertension. In England and Scotland on the other hand the first place in the etiology of chronic heart disease is held by rheumatic fever (Cotton<sup>15</sup>). Allan<sup>16</sup> This seems significant when one considers the difference in temperament and mode of living between the English and American people.

Just how great a part chronic hypertension plays in the etiology of general arteriosclerosis is difficult to determine. Allbutt in his "Diseases of the Arteries including Angina Pectoris," mentions hyperpiesis first among the causes of arterial disease, and it is

safe to say that as our knowledge of the subject becomes more complete, we shall attribute to this cause still greater importance.

The manner in which hypertension causes anatomic changes has led to much speculation. Moschovitz<sup>17</sup> believes that many of them can be accounted for by a mechanical stretching of the tissues with replacement fibrosis followed by hyalinization and calcification. Thickening of the intima, hypertrophy of the media and increase in the elastic fibers he believes to be in a great measure compensatory.

The only constant manifestation of early essential hypertension is the symptom which has given to this disease its name, i. e., persistent high blood pressure unaccounted for by some evident cause such as hyperthyroidism, acute nephritis or toxemia of pregnancy. Of other early symptoms which occur the most common are fatigue, irritability, vertigo, insomnia, dyspnoea upon exertion, palpitation and digestive disturbances. Late symptoms depend upon impaired cardiac, renal or vascular function and are not in any way characteristic of hypertension.

It is not my intention to discuss in detail the management of hypertension. This phase of the subject has been well covered by Du Bray<sup>18</sup> in a paper read before this section in 1923. Dietetic restrictions, modified habits of work and play, sedative drugs, hydrotherapy, glandular extracts, venesection, etc., may all have their places in the treatment of this condition. The problem which confronts physicians today (a problem just as vital if less evident than that of cancer), is the prevention of hypertension. As physicians we could accomplish much by cultivating a closer relationship with the relatives and friends of the patients with whom we come in contact. We would then be in a position to advocate periodical physical examinations, shorter working hours under less tension and more frequent vacations of the right sort for the modern business man. We could preach the dangers of obesity and excessive use of tobacco. It might even be possible to influence the children in families prone to develop hypertension, to choose a life work in which they would be likely to meet a minimum of the stress and strain of life as it is lived in America today.

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### THE APPENDICITIS PROBLEM †

By THOMAS O. BURGER \*

IT IS the duty of the section chairman to make an opening address before the group over which he presides. What he shall say is up to him. I have chosen to depart from the usual inspirational paper or yearly summary of progress to the section's credit and to sketch some phases of our problems as surgeons with the hope of stirring up some serious thinking. If we do not stop now and then and listen to those of our number who are strong for figures, we are too prone to remember only our successes and to forget our failures.

Willis in a recent paper on surgical mortality has served to confirm in the minds of some of us the fact that the mortality rate in appendicitis is entirely too high. Too frequently do we read in the public press that Mr. So-and-So died following an operation for appendicitis. Of course the newspaper never mentions the fact that Mr. Blank, who had never been vaccinated, died of smallpox. That would put the blame on the victim. The death following appendectomy is "good news stuff" because it is made to appear that if a meddlesome surgeon had kept his hands off the valuable citizen would still be alive. Humanity would benefit by the smallpox notice, the cause of public health be fostered. This is the situation we find ourselves in, quite a disconcerting one too, to say the least. I want to lay this matter of appendicitis and its mortality rate before you, as I have said, for thoughtful consideration.

Why is the mortality rate not decreasing, why is it indeed increasing, as the figures seem to indicate? It is a particularly serious question, for the fatalities are among the younger members of society, people at the beginning or at the height of their economic careers, together with a high proportion of children between the ages of 5 and 15. Some of these deaths can be laid at the feet of relatives and

† Chairman's Address, Section on General Surgery, presented at 1926 Session, California Medical Association, Oakland.

\* Thomas O. Burger (First National Bank Building, San Diego). M. D. Medical Department Vanderbilt University. 1900. Hospital connections: President of Staff Mercy Hospital; surgeon Scripps Memorial Hospital, La Jolla and San Diego General Hospital. Previous honors: F. A. C. S. Scientific organizations: San Diego County Medical Society, California Medical Association, and American Medical Association, Pacific Coast Surgical Association. Practice limited to General Surgery since 1915.



friends, especially the fond mothers of the children. The layman cannot for the life of him see why every conceivable disturbance below the diaphragm should not be subjected to at least one massive dose of castor oil. "Blow it out" seems to be the slogan. The layman naturally holds off from surgical interference as long as possible. He has in his system the accumulated fears of the past, fortified by the prejudices stimulated by the anti-propaganda of the Sunday newspaper. He needs educating. Who is to educate him?

That question brings us to the next phase of the problem—the general practitioner or family physician. Most patients are first seen by him. A patient with an acute abdominal disturbance may promptly receive a second dose of cathartic. Why do some doctors continue this dangerous practice? Is not the real indication for catharsis diarrhea? Is not nature doing its best to put the bowel at rest? Yet by the injudicious use of cathartics the bowel is too often whipped into breaking down the protective barriers that may be forming. We cannot educate the layman until all doctors utilize the principles of physiology and pathology in treating the sick. Then we have the occasional doctor who forever is watchfully waiting. He has heard something about an Ochsner treatment that has tided patients over the acute stage of appendicitis. We all have heard of the appendicitis that turned out to be a pneumonia. That gets publicity and gives much chagrin. Which is no excuse for such wholesale delay. But to go back to this watchful waiting. Just what does the general physician do during this period? Acute appendicitis, or any acute abdominal disturbance where decision is not definite, should be given careful study with an open mind. Undoubtedly physicians should study patients with acute abdominal symptoms more thoroughly and with less preconceived ideas of what we expect to find or what treatment should be instituted than is required in any other acute medical problem.

The variations in the locations of the appendix as to surroundings makes a difference in the symptoms and signs, e. g., a retrocecal appendix or one well protected by a thick omentum may not show rigidity or local point tenderness, and may not induce so much pain. This often prevents the doctor who is not thinking in terms of "appendicitis and its disastrous ending by delay" from making an early diagnosis. Here is where a blood count may be of inestimable value.

Again we may have an infection of the appendix of a patient who may get well even if purgatives are given heroically, and some even recover by abdominal massage, proving that individualization is needed and not rule of thumb methods. The rapidly fulminating appendicitis, gangrenous in the first few hours, followed quickly by edema, local anesthesia and death, is another pitfall for the unsuspecting physician. This type (and appendicitis where first warning is perforation of its walls, and the fecalith and infection contaminates the peritoneum) costs many lives, not through any fault of the physician, because the danger may be recognized and a physician called too late.

When we recall the excessive, unnecessary loss of lives, mostly during their productive years, because of appendicitis, is it not pardonable to restate some of the facts that are known but not always heeded?

In an acute appendicitis, or an abdomen where such is suspected, "watchful waiting" may be indifference to danger, or it may be inability to overcome the patient's reluctance, or the desire of friends to "wait and see" if operation is the only possible chance. There may come a time when professional and public sentiment will make such delay so unpopular that the experience will be hard to live down. All possible means should be used in order to get essential data for diagnosis and treatment, even if consultation must be called to reinforce the appeal and share in the responsibility of judgment.

Patients who are ill two, three, five or more days often are the ones who test the judgment of physician and the surgical consultant. Such are the patients where the Ochsner treatment undoubtedly is often best. But an open mind is essential. Do not, as I have heard some say, "operate upon all patients at any time as soon as the diagnosis is made." A preconceived opinion converted into diagnosis by dogmatism is a disaster to the unfortunate with acute appendicitis.

Another factor in the high mortality rate from appendicitis is the operating by physicians lacking in necessary skill and surgical judgment. I admit I hold a brief for the surgeon who limits his work to surgery; he who gives his life to it and through experience has gained sound judgment. We know that at the most unexpected times a patient may present a most difficult situation requiring prompt surgical judgment and action. The old well-expressed definition of a surgeon as "one who, when in difficulty, is able to get out successfully" implies such experience and judgment. I hold that appendicitis is a surgical condition for the surgeon to handle. You have an infected tube of infinite, yet definite, potentialities in an extremely vulnerable cavity, a picture that often presents trying diagnostic and therapeutic problems.

Having found fault with the family and the family physician, I am going to take a shot at the surgeon himself. As the Quaker said to the burglar on the fence, "I'm going to shoot where thee sits. If thee does not want to get hit, thee had better get down." The surgeon has his faults too, and some of them are not pleasant to think about. How much of the dislike and distrust of the layman have we truly merited? How much of the hesitancy of the general practitioner in calling on us is justified? Quite a bit, I regret to say. There are sometimes patients who may be safely tided over a crisis until the so-called "interval appendectomy" may be done. But we are sometimes afraid that the patient will slip away from our grasp. However, what I desire to stress even more than the "furor operativus" is our relationship to the man who has been the family adviser and attendant. He, too often, is humiliated in the presence of the frantic family. He may merit censure, but never in the sickroom or in public. I admit that it often takes a lot of tact and quick-witted action to save the hide of some good family



doctor who has done his best and yet blundered. But criticism does not benefit you, the other doctor, or the family. Does the surgeon overshadow his fellow-practitioner professionally? Yes, often, consciously or unconsciously. As the patient is recovering with gratitude at its height, that is the time for the surgeon to get in his education of the family and friends regarding the hard-working and conscientious family physician, with his unceasing care, his diagnostic ability and his promptness in recognizing the value of outside assistance. You do that and you have not only restored a faith in the medical profession that is probably waning, but you have made a friend of the physician, a friend who in the future will feel less hesitant in calling in a surgeon. The consultant and operator should see to it that the referring doctor is not overshadowed financially, as is too often the case. He has justly earned a fee for services rendered, and the family should so understand it. He has made the diagnosis, prepared the family and the patient for eventualities. He has succeeded in bringing about the proper treatment and watched the patient through convalescence. If the general practitioner does not get a square deal financially, how can you expect him not to be influenced unwittingly or otherwise in what he does?

We must admit also still another phase of the problem that is no doubt not a universal one, but one varying in its importance in different localities. I refer to the standardized staff hospital. Our efforts at raising the standards of the profession have brought additional difficulties. Acute appendicitis is first seen in the majority of cases by the family physician. Large numbers of these men, as good as the average, are not on the staffs of many of these hospitals for many reasons. They know that once a hospital is considered, the patient will be completely lost to the staff surgeon and they will be left outside in the proverbial cold, again overshadowed professionally and financially. Lord Dawson while here last winter commented on just this same situation that they are facing in England. He offers a solution in the suggestion that three types of hospitals be organized and recognized. The first is a strictly closed staff hospital; the second a closed staff institution, permitting other physicians to come in and retain a slight hold on the patients; and the third would permit the regular practitioner to bring in his patients and treat them under a sort of supervision by the staff. I cannot agree with this classification. Nevertheless we must admit that the attitude of the hospital still further complicates our problem.

Our appendicitis problem then is this: There is an increase in the mortality rate due (1) to the attitude of the layman; (2) the problem of treatment by the general practitioner; and (3) the surgeon himself, with special reference to his relationship to the referring physician.

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The maintenance of individual practice in the person of the general practitioner or family physician is of the utmost importance for the survival and continuation of the family home as the foundation of the nation.—Wendell C. Phillips, M. D., *Journal A. M. A.*

## THE IMPORTANCE OF BUCK'S AND COLLES' FASCIÆ IN URINARY EXTRAVASATION †

By MILEY B. WESSON \*

### INTRODUCTION

COLLES' fascia and Buck's fascia are of interest to all surgeons because of the part they play in controlling the directions and extent of periurethral inflammation, abscess or urinary extravasation incident to rupture of the urethra. Such conditions are among the most complicated that come to the surgeon's attention, and the treatment calls for the rarest skill and judgment, as indicated by the all too frequent fatalities that follow unscientific therapy. Clinical reports in the literature depict a variety of methods of treating urinary extravasation. Emphasis is laid upon the bad prognosis and the necessity in most cases of radical and mutilating surgery. However, details as to the paths and the rapidity of the extravasation are practically always lacking.

Four cases of limited extravasation are reported: a ruptured varicocele with a hematocele that was confined within Colles' fascia, and three localized extravasations that conformed to Buck's descriptions as "circumscribed, hard, prominent swelling of the size of a Madeira nut in the anterior part of the scrotum, covering and closely embracing the urethra and also extending on either side around the root of the penis in the form of an indurated flattened band."

The term "fascia" is a confusing one. Technically, it is defined as a sheath or band of tissue which invests and connects the muscles. Practically all fasciæ are merely condensations of the fibrous connec-

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\* Miley B. Wesson (1275 Flood Building, San Francisco). M. D. Johns Hopkins University, 1910; B. S. University of Texas, 1902; Graduate study: Internship Hudson Street Hospital, New York, 1910-12; Johns Hopkins Hospital, 1919-21. Practice limited to Urology since 1921. Medical Reserve Corps, 1914-19. Served five months on the western front during World War. Publications: A Simple Apparatus for Intravenous Administration of "606," and Technique of Using Same (*Texas State Medical Journal*, June, 1911); Chronic Lymphatic Leucemia—Study of a Case, with Particular Reference to Blood Picture and Ferments in the Urine (*Medical Record*, November 9, 1912); A Report of Meningitis Cases (*Bulletin, El Paso County Medical Society*, June, 1912); Epidemic Cerebrospinal Meningitis (*New York Medical Journal*, March 22, 1913); Sunstroke and Its Treatment (*The Medical Review*, 1913); Clinical Report of a Case of Rabies Treated with Neosalvarsan and Quinin, Together with a Case of Lysophobia (*The Journal of the American Medical Association* (January 17, 1914); Rabies (*New York Medical Journal*, October 28, 1916); Spinal Puncture in Relation to Headache (*Southwestern Medicine*, January, 1917); Henoch's Purpura (*The Medical Record*, December 1, 1917); Anatomical, Embryological and Physiological Studies of the Trigone and Neck of the Bladder (*The Journal of Urology*, June, 1920); The Anatomy and Surgery of the Trigone (*Archives of Surgery*, July, 1921); An Anatomical and Embryological Study of the Perineum (*California State Journal of Medicine*, August, 1922); The Development and Surgical Importance of the Rectourethralis Muscle and Denonvilliers' Fascia (*The Journal of Urology*, October, 1922); Fasciæ of the Urogenital Triangle (*The Journal of the American Medical Association*, December 15, 1923); Pyelography—Common Diagnostic Errors (*California State Journal of Medicine*, May, 1923); Diseases of the Prostate and Their Treatment, Medical and Surgical (*Northwest Medicine*, February, 1925); The Prostatic Median Bar, Complications and Treatment (*California and Western Medicine*, June, 1925); Cysts of the Prostate and Urethra (*The Journal of Urology*, June, 1925); Industrial Hernia Versus Seminal Vesiculitis and Vaginitis (*California and Western Medicine*, February, 1926); The Treatment of Traumatic Rupture of the Kidney (*Annals of Surgery*, February, 1926).

tive tissue everywhere present and which is split in various ways by different dissectors. Embryologically, fascia consists of a condensation of mesenchymal tissue which occurs subsequent to the formation of a structure. A lack of liaison between the dissecting room, where fascia is demonstrated on a hardened body as a single dense sheath, and the surgical amphitheater where it appears as thin layers bound together with connective tissue partitions, is responsible for most of our inaccurate anatomical knowledge and bizarre perineal surgery. Such terms as Buck's fascia, Denonvilliers' fascia, and internal sphincter of the bladder indicate to the surgeon clinical entities, but to the anatomist they are not definite structures. Colles' fascia has been more or less indefinitely depicted in the textbooks of descriptive anatomy, but unfortunately no two descriptions are alike. Buck's fascia has been ignored by the anatomical textbooks and is referred to only in textbooks of urology.

So far as I can find, there is no reference (until recently) in the literature to the original article of Buck, although it was published in Vol. 1 of the *Journal of the American Medical Association*. I unearthed it by the systematic investigation of all articles written by "Buck" listed in the *Index Medicus*; the Surgeon-General's library was freely consulted and it took months to obtain and look over the publications, as the search extended back year by year until a span of seventy-eight years was covered.

Gurdon Buck, Jr., in 1848 treated a patient at New York Hospital for a localized extravasation of urine, which occurred at the root of the penis. The rupture of the urethra had taken place within the sheath of the corpus cavernosum, and the inflammatory swelling consequent to the extravasation of urine was confined to these narrow limits. As a result he reported the discovery of a distinct membranous sheath investing the penis and forming a continuation of the suspensory ligament above and the perineal fascia below, and laterally to form one continuous membrane with the sheath enclosing the corpus cavernosum in its cavity, and embracing the corpus spongiosum between two layers, one of which passes above and the other below.

Abraham Colles, an Irish surgeon, in 1811 noticed that following a rupture of the posterior urethra the effusion of urine formed a tumor in the perineum that did not suppurate there because of the unyielding nature of the fascia and that diffusion laterally toward the thighs was prevented by the close attachment of this fascia to the rami of the pubes and ischium, hence it passed into the loose tissue of the scrotum and there suppurated or passed up over the pubes.

Three types of urinary extravasation are commonly encountered: (1) between the layers of Buck's fascia; (2) within the superficial perineal interspace; and (3) distal to the deep layer of the urogenital diaphragm.

If the rupture occurs anterior to the urogenital diaphragm, the penile fasciae confine it and produce a circumscribed swelling. The septum of Buck's fascia usually protects the corpora cavernosa from involvement, but if the opening is through the

dorsum of the corpus spongiosum the tunica propria of the corpora cavernosa protect these bodies from invasion.

The common pathway, however, is ventral and the extravasation is confined temporarily within the superficial perineal interspace, but Colles' fascia with its dense partitions interposes an effective barrier and prevents the spread posteriorly to the ischio-rectal fossa and laterally to the thighs. As a result, the tumefaction tends to pass from the perineum down to the scrotum and then up over the pubes. In early stages the extravasation is unilateral; later both sides of the scrotum, as well as the penis down to the coronary sulcus, are involved and the fluid may even pass up beneath Scarpa's fascia on the abdomen as far as the axilla.

If the rupture occurs distal to the urogenital diaphragm, the extravasation is held forward by Denonvilliers' fascia. By dissecting up the peritoneum from the bladder the urine passes into the space of Retzius, and may extend posteriorly to the diaphragm and eventually even pass through the inguinal rings and appear on the abdomen.

Urinary extravasation occurs when there is an actual break in the mucous membrane. Although it is commonly considered as a complication occurring after rupture of the urethra by external violence, or periurethral abscess with stricture, it is not unusual to find it following the unsuccessful passage of a sound, a Young's punch, or a velvet-eye catheter on a stylet. Stylets should be used only with alpha-eye catheters, since the point tends to slip through the eye of the ordinary catheter and penetrates the space of Retzius, the weakest portion of the urethra being the roof immediately behind the triangular ligament. When force is used in passing a sound, a slight tear is often made in the wall of the urethra. This usually heals spontaneously, but if a solution of potassium permanganate is used afterward as an irrigation, there is a slough and extravasation.

Localized extravasation confined within Buck's fascia, generally secondary to an abscess of a gland of Littre, should be drained by means of an endoscopic incision made with a cautery knife. When such an intraurethral incision is made, the irrigating solution of choice is mercurochrome. Extravasation will not spread if there is drainage, and necrosis can be prevented if sufficient 5 per cent mercurochrome is kept in contact with the tissues.

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Baby Jones, Willie Jones, Bill Jones, and, eventually, William Q. Jones the dignified senator from Oopla, in the eyes of the census enumerator—mathematically—is, and has been throughout his days, a single individual entity, one, and so he will continue until he is gathered to his fathers, but, from a physician's standpoint, he has never had a stable oneness, but has varied with the days, the seasons, the years; each slip from right living, each stumble along the way of life, each more or less serious illness left its imprint, and made its change; so, physically, he has been as the shifting sand, and William Q. is far other than the original wee Jones.—*Ohio Health News*.

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The average car costs the average car owner more than the income of the average farmer, yet the average farmer owns an average car. Or are liars figuring?—*Weston (Oregon) Leader*.



## DERANGEMENT OF THE ANKLE-JOINT, FOLLOWING FRACTURES OF THE LOWER END OF THE TIBIA AND FIBULA

By LIONEL D. PRINCE \*

*The great importance of accurate reduction in fractures involving the ankle-joint, particularly in reference to the complete restoration of the proper weight-bearing alignment, is emphasized. To permit union to take place with faulty weight-bearing alignment is to subject the patient to an additional crippling influence which may become a marked and painful permanent disability. Careful after-treatment is essential to a good functional result. In patients with malunion and faulty weight-bearing alignment, very satisfactory improvement, and often total restoration of function, may be obtained by operative correction of alignment.*

DISCUSSION by E. W. Cleary, San Francisco; H. D. Barnard, Los Angeles.

THERE is probably no type of fracture which, either through gross ignorance or real carelessness, is so frequently mishandled and improperly treated as a fracture of the lower end of the tibia and fibula. The surgeon is only too frequently satisfied with an incomplete reduction in which the normal mortise-like relation of the lower end of the tibia and fibula to the astragalus and os calcis is not kept in mind, and union of the fractures is permitted to take place without regard for the proper restoration of weight-bearing alignment. As a result, the patient is doomed to have throughout life a permanent disability which may prove to be a serious source of incapacitation and discomfort. The problem is of the greatest importance in industrial surgery, particularly from the point of view of rehabilitation and economics.

Fractures of the lower end of the tibia and fibula, involving the ankle-joint, are extremely common and practically always produced by indirect violence, the force being applied in such a manner as to cause abnormal bending or twisting of the foot. This group of fractures, which are often erroneously designated as Pott's fractures, includes several varieties, the individual type depending almost wholly on the manner in which the traumatic force or strain is applied.

Before discussing the mechanics of reduction in such fractures I will review briefly the essential anatomy of the ankle-joint. The relation between the lower end of the tibia and fibula and the astragalus and os calcis must be constantly kept in mind.

The ankle-joint is essentially made up of the lower ends of the tibia and fibula and the upper portion of the astragalus, the latter being held mortise-like between the internal and external malleoli. The roof and mesial border of the mortise is formed by the tibia, while the lateral border is formed by the fibula, which does not functionate

in the transmission of weight-bearing. The ankle-joint proper consists of two articulations—the tibio-fibular junction and the articulation between the lower ends of the tibia and fibula and the astragalus. The tibio-fibular junction is not a true articulation, but is rather a ligamentous union. The inferior tibio-fibular ligaments, the interosseous membrane and ligaments, and the transverse ligament are largely responsible for the strength and stability of this articulation. The articular facet of the astragalus, which is distinctly wider anteriorly, fits snugly in the mortise-like space between the two malleoli, and is firmly held there by thick and firm ligaments. The joint capsule, extending from its attachment to the tibia and the under surface of the malleoli to the astragalus, is strongly reinforced by the deltoid or internal lateral ligament and the external lateral ligament, whose origins are on the internal and external malleoli, respectively. Motion in the ankle-joint is almost completely in the anteroposterior plane—that is, dorsi and plantar flexion. All lateral mobility is prevented by the malleoli and lateral ligaments. Lateral movements of the foot, such as abduction or eversion and adduction or inversion, have their origin in the sub-astragalus joint and bear no relation to the ankle-joint proper. The superior surface of the astragalus and the articulating surface of the tibia are parallel, and in a frontal view lie perpendicular to the axis of the leg. The weight-bearing alignment through the tibia passes approximately through the center of the body of the astragalus.

Fractures of the lower end of the tibia and fibula, involving the ankle-joint, according to Wilson and Cochrane, may be classified in respect to the mechanics of production. The fractures are essentially due to the applied strain to the lower ends of the tibia and fibula, the "effect being produced by a combination of leverage action from bony contact and arrachement from ligamentous pull."

According to Ashhurst, the torsion fracture of the lower end of the fibula, resulting from external rotation of the foot on the leg or rotation inward of the leg, with the foot fixed, is the most common of ankle fractures. The astragalus pressing against the external malleolus as it turns in the mortise results in a fracture running obliquely upward. It is possible for such a force to continue, and where this occurs the internal malleolus is pulled off, as the result of tension on the internal lateral ligament. A continued additional force may produce a fracture through the posterior aspect of the lower end of the tibia. Occasionally, such a force may separate the lower ends of the tibia and fibula, and as the result the fibula may be fractured through its neck at the upper end.

The well-known Pott's fracture is produced by forcible eversion or abduction of the foot on the leg. As the foot is abducted, the strain falls on the internal lateral ligament and the inferior tibio-fibular ligament. The internal lateral ligament may rupture or the internal malleolus, to which it is attached, may be fractured. The astragalus, pressing outward on the external malleolus under a continued force, causes its fracture or a fracture of the

\* Lionel D. Prince (710 Medico-Dental Building, 490 Post Street, San Francisco). M. S. University of California, 1911. M. D. University of California, 1912. Practice limited to Orthopedic Surgery. Hospital connections: University of California and Mount Zion hospitals. Appointments: Instructor in Orthopedic Surgery, University of California; orthopedic surgeon, Mount Zion Hospital; Lieutenant-Colonel M. O. R. C. Publications: "Congenital Genu Recurvatum," Surgery, Gynecology and Obstetrics, 1917; "Uncomplicated Fractures of the Pelvic Ring" (Harold Brunn and Lionel D. Prince, California State Journal Medicine, 1921).

fibula two or three inches above. As the result of a rupture to the tibio-fibular ligament, the ankle mortise is widened, and there may be an associated posterior dislocation of the foot, with a fracture of the posterior margin of the tibia. The Pott's fracture, therefore, consists essentially of a fracture of the tip of the internal malleolus with a rupture of the internal lateral ligament, a separation of the interior tibio-fibular articulation, and an oblique fracture of the fibula two or three inches above the malleolus. There may be some backward displacement of the astragalus, with a fracture of the posterior articular border of the tibia.

As a result of a forcible and violent turning inward of the foot, the so-called inverted Pott's fracture may occur. The strain is exerted in an opposite manner to an abduction fracture, and the resulting fractures are typical. The astragalus presses against the external lateral ligament, causing its rupture. Should the violence be arrested at this moment, the condition commonly known as sprained ankle results, or if the tip of the malleolus is fractured a sprain fracture occurs. A continuation of such a force causes a tilting of the astragalus, which in turn presses against the internal malleolus, causing its fracture, or an adjoining vertical splitting of the tibia.

Cotton has described a type of fracture, frequently designated by his name, produced as the result of the violent wrench of the foot upward and backward. Such an accident may occur by the catching of the heel of the shoe on the stairs, or by tripping over an obstacle. The foot is usually displaced backward, and as the result the astragalus is thrust violently against the post-articular margin of the tibia, a fracture of the tibia occurring, the triangular-shaped fragment of bone being displaced backward with the astragalus and foot. This fracture may be associated with other fractures of the ankle.

The diagnosis of fracture of the ankle-joint is ordinarily easy, and usually a careful history, with the presence of deformity, is sufficient. Frequently, swelling and pain prevent a proper examination and the exact classification of the type or extent of fracture. Roentgen examination is most valuable, and should be done in all injuries about the ankle-joint.

The proper reduction and treatment depends essentially upon our knowledge of the type and extent of the fractures and the displacement. The x-ray is invaluable for this information. A good end-result in fractures involving the ankle-joint can be obtained only by proper treatment and management, and improperly reduced fractures invariably result in the production of long periods of disability and frequently permanent crippling. Complete ana-



Figure 1 (A)

Figure 1 (B)

Figure 1. (A) Pott's fracture in which the fragments have united with outward and posterior displacement of the astragalus. (Case I.)

(B) Correction of alignment following double osteotomies of the tibia and fibula.

tomical replacement of the fragments, with careful after-treatment, is essential to good function.

Reduction in the majority of fractures through the ankle-joints may be obtained by closed manipulation. Open reduction is rarely indicated. As with all fractures, the sooner after the injury the reduction is attempted, the greater are the chances for a successful replacement. Swelling soon occurs, occasionally associated with blebs, and when a considerable swelling is present it is often expedient to delay reduction. In such instances the leg should be placed temporarily on a pillow, with side splints, and maintained in an elevated position.

Manipulative reduction in these fractures is accomplished by reversing the steps by which the displacement was produced. Complete relaxation facilitates reduction and complete anesthesia should always be administered. If we keep in mind the mechanics of production of the various types of fractures, the mechanics of reduction are relatively easily applied in the treatment of recent fractures involving the ankle-joint. Before attempting any manipulative reduction, I have found it of great advantage to study carefully the landmarks of displacement, correlating the clinical and x-ray findings to this end. Often the disappearance of these landmarks gives us the best immediate evidence that reduction has been accomplished. A plaster fixation following reduction is the best and most reliable splinting; the plaster should be applied carefully, evenly and not too tightly, the foot being held in the position of full correction. The cast may extend to the knee or above the flexed knee, depending on the method of choice of the surgeon. Strong inversion of the foot is essential to the maintenance of



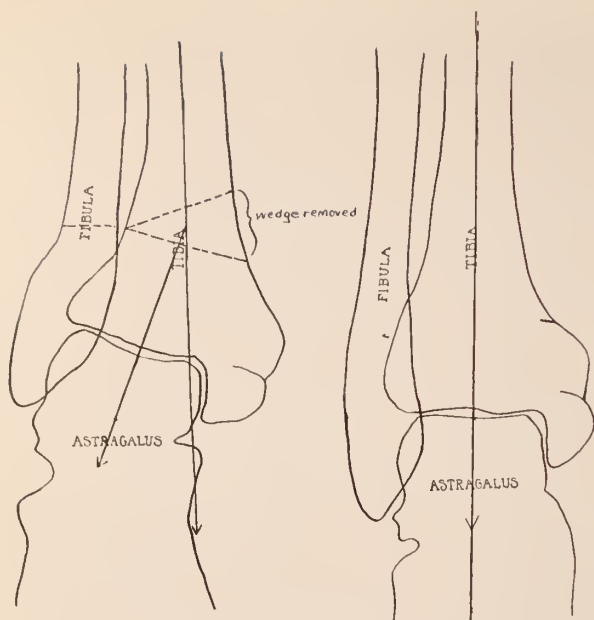


Figure 2 (B)

Figure 2. Diagrammatic illustration of Case I, showing the type of osteotomies performed and resultant correction.

reduction in eversion fractures of the Pott's type. It is important to remember that the inversion must be in the ankle-joint and not in the fracture line, as infrequently the everted type of fracture is converted into an inverted type, owing to lack of observance of this point. Radiographs in both antero-posterior and lateral positions always should be taken following reduction, and, in the event that reduction is not satisfactory, a second effort should be made as soon as possible. The after-treatment consists essentially in the institution of physiotherapy in the third or fourth week, the cast being split and made removable for this purpose. Weight-bearing should not be permitted until six or eight weeks, depending on the progress of healing. The patient should then wear a shoe with the heel and sole raised one-quarter inch on the inner side. It is my practice, where there is a tendency toward flat-foot, to provide a properly fitting arch support.

If the general principles in regard to the treatment of ankle-joint fractures are kept in mind, satisfactory results will be obtained in the majority of patients. Indifference of the surgeon to the necessity for absolute reduction is dangerous. Failure to keep in mind the paramount importance of the restoration of normal weight-bearing alignment may be productive of lamentable results in permitting union to take place with the fractures in malposition. When good reduction has been obtained too early weight-bearing, without proper precautionary support before the soft callus is sufficiently resistant, may permit a partial recurrence of the original deformity. Even the moderate displacements of partially corrected deformities may cause irregularity in joint surfaces, and consequently uneven bearing and, in certain instances, the so-called traumatic arthritis, a most annoying and disabling complication.

Unquestionably, the two great factors largely responsible for disabilities in fractures in this region

are the deviation of the foot from the line of weight-bearing and the loss of motion in the ankle-joint. The former, through proper care, can usually be prevented, the latter by the same observance can be reduced to a minimum as a factor in the production of disability through proper reduction, early physiotherapy and the prevention of partial relapse to deformity.

Loss of motion, even where a good reduction has been obtained, is not infrequently an important factor in the establishment of a permanent disability. Loss of antero-posterior motion may be due to minor joint changes or to shortening of the heel cord, not infrequently produced by fixation of the foot in equinus. Except in those patients where such a position is not compatible with the maintenance of reduction, the fact should be immobilized and dorsiflexed at right angles with the axis of the leg. A short heel cord tends to produce a flat-foot deformity with associated disability. Diminished or painful lateral motion is a frequent source of lameness, and painful disability is often accentuated by walking on uneven ground. Early intelligently applied and continued physiotherapy will do much to eliminate this factor in the disability.

Unquestionably, the most severe types of disability following fractures involved in the ankle-joint are seen in those patients where union has been permitted to take place without regard for proper restoration of weight-bearing alignment. Malunion in a Pott's fracture is a common cause of severe disability. The foot is displaced to the outer side of the weight-bearing alignment and there results the deformity, pain, and limp characteristic of flat-foot. The displacement, however, is not due to abduction of the foot as in static flat-foot, but is due to actual displacement of the whole foot at the site of fractures (Figures 1 and 3). For this reason ordinary conservative treatment is usually unsuccessful.

Inward displacement of the foot, with reference to the weight-bearing alignment resulting from malunion, is likewise the source of persistent painful disability (Figure 5). The patient tends to walk on the outer side of the foot, developing fatigue, pain, and awkwardness of gait. Severe cases cause marked crippling. Other factors in the production of disability in badly treated fractures are widening of the mortise (Figure 4), backward or forward displacement of the foot, and weakening or relaxation of the ligaments. Any of these conditions existing alone or in combination may cause pain, loss of motion, or weakness in the ankle-joint.

The outlook for restoration of function where malunion has been permitted to occur is by no means hopeless, and operative intervention often gives very encouraging and satisfactory results. Deformities of the ankle-joint, following Pott's and the inverted type of fractures, are particularly amenable to operative treatment. The operation which I have performed, with excellent results, consists essentially in double osteotomies of the tibia and fibula, just above the site of fracture. In those patients where union is not as yet complete, the fracture sites may be osteotomized, the fragments



thoroughly mobilized, and the ankle-joint treated as in cases of a fresh fracture. In the presence of solid union, osteotomies through the former fracture sites should not be attempted. A compensatory osteotomy at a point higher up results in excellent correction and does not, by adding fresh trauma to the ankle-joint, jeopardize the existing motion. The technique is quite simple, and is not associated with any particular difficulties.

In Pott's fracture an osteotomy of the fibula is performed and the external malleolus thoroughly mobilized. A cuneiform or wedge-shaped osteotomy of the tibia is then performed through an open incision, sufficient bone being removed to permit full correction of the alignment. Uncertainty about the amount of bone to be removed to obtain correction may be determined accurately prior to the operation in the following manner: Make a tracing of the x-ray of the deformed ankle and cut the tracing out as one cuts out a silhouette. A wedge may then be cut from the outlined tibia, sufficient paper being cut away to permit correction of the weight-bearing alignment when the edges of the wedge are approximated (Figure 2). The foot following the operation is immobilized, well inverted in plaster of paris. In the inverted type of fracture no bone is chiselled from the tibia, but following the osteotomy a small section is removed from the fibula, the amount depending on the degree of correction necessary. One may place in the gap in the tibia produced by the correction small pieces of bone removed from the tibial shaft. The correction is maintained by fixation in plaster.

The post-operative treatment is essentially the same as that extended to fresh fractures, with the exception that extra precautions against the recurrence of deformities, especially in the inverted type, are indicated.

#### CASE REPORTS

**CASE I.** Mr. S., age 30, injured February 5, 1922, when he was thrown from a car, falling a distance of twenty feet to an embankment. He sustained comminuted fractures of the lower end of the tibia and fibula, and the foot was immobilized in plaster for six weeks. The patient was first seen by me in June, 1922, at which time he complained of marked pain in the foot and was unable to walk any considerable distance, and unable to work.

The patient walked with a moderate limp. There was present marked valgus deformity of the right ankle-joint, with considerable widening. Movements of the ankle-joint were about 50 per cent, limited in all directions. As the patient stood, the axis of the weight-bearing alignment extended to a point internal to the foot. X-rays showed an old Pott's fracture, which had united with marked outward displacement of the astragalus and corresponding displacements of both malleoli (Figure 1A).

An attempt was made to relieve the symptoms by providing a corrected shoe and a foot-plate for the patient. While considerable improvement was secured, a correc-



Figure 3 (A)

Figure 3 (B)

Figure 3. (A) Pott's fracture with outward displacement of the astragalus and external malleolus. (Case II.)

(B) Result following osteotomies of the fibula and internal malleolus and correction of weight-bearing alignment.

tive osteotomy of the fibula and a wedge-shaped osteotomy of the tibia was done November 14. In order to obtain sufficient correction of the alignment, it was necessary to remove a tibial wedge, measuring one inch in diameter at the base (Figure 2). Following the operation, the foot was immobilized by plaster in the corrected position. A walking-cast was applied about six weeks later. Following the removal of this cast, physiotherapy was instituted. The patient was discharged in March as being fully able to return to his employment. Examination at the time of his discharge showed full normal range of motion in the ankle-joint, excellent alignment, and no painful disability (Figure 2 (B)).

**CASE II.** Mr. L., age 58, a laborer, on March 12, 1924, was caught in a rockslide, sustaining a left Pott's fracture. The fracture was reduced, and the leg and foot immobilized in plaster for five weeks. I saw the patient in May, 1924. He complained of marked pain in the ankle-joint, was unable to put any weight on the foot, and walked with canes.

The ankle-joint was decidedly widened. The external malleolus was unusually prominent, and the foot was displaced outwardly to the normal weight-bearing alignment. Motion in the ankle-joint was markedly restricted in all directions, and was associated with considerable pain. Inversion was entirely absent. X-rays showed an old Pott's fracture which had united with outward displacement of the astragalus and corresponding displacements of both malleoli (Figure 3 (A)).

On May 28, 1924, double osteotomies at the site of both malleoli fractures were performed. Following correction, the foot was immobilized in plaster in the inverted position. Subsequently, a walking-plaster was applied. Following its removal, physiotherapy was instituted and a foot-plate provided. The patient was discharged in November, with a good restoration of weight-bearing alignment, and the ankle-joint exhibited only slight restriction to motion. The patient complained of slight pain in the ankle-joint, especially noticeable in cold or damp weather. Owing to the age of the patient, it is probable that he had a mild traumatic arthritis of the ankle-joint. (See Figure 3 (B)).

**CASE III.** Mr. L. G. B., age 32, on February 17, 1924, was struck by a bull, sustaining a fracture of the right fibula in the lower third, with partial dislocation of the



Figure 4 (A)

Figure 4 (B)

Figure 4. (A) Marked outward and backward displacement of the astragalus following fracture of the fibula. (Case III.)

(B) Restoration of alignment following osteotomy of the fibula.

astragalus. He received medical treatment, and in a few weeks was discharged as cured by his attending surgeon. He was seen by me in April, 1924, when he complained of marked pain and weakness in the right ankle-joint and foot, which he stated were increasing, and he was unable to walk without the use of crutches.

There was marked widening of the ankle-joint and extreme outward displacement of the foot. Antero-posterior motion of the foot was fairly normal, but extremely painful. It was impossible to invert the foot or to correct to any degree the marked valgus deformity. X-rays showed a healed fracture of the fibula in the lower third, and marked outward displacement of the foot. There was a gap of nearly three-quarters of an inch between the inner border of the astragalus and the articulating surface of the internal malleolus. (Figure 4 (A)).

On April 8, an osteotomy of the fibula was done. The foot was manipulated with a Thomas wrench, and following reduction was immobilized in plaster in a well-inverted position. In about five weeks a walking-plaster was applied and subsequently physiotherapy instituted. The patient was discharged on July 19 with an ankle-joint which showed no evidence of any deformity, and motion was free and normal. The pain, likewise, was completely absent, and the patient returned to his regular employment. (See Figure 4 (B)).

CASE IV. L. J. H., age 47, a laborer, sustained a right-sided inverted Pott's fracture on July 29, 1922, while working on a rock crusher. The fracture was reduced and immobilized for seven weeks. Subsequently, owing to

the incomplete reduction, a second manipulation was done and a cast applied. The patient consulted me in February, 1923, six months after the injury, because of constant and increasing pain in the ankle-joint, inability to walk much, even with the aid of a cane.

There was definite inward displacement of the foot to the inner side of the weight-bearing alignment of the leg, there was moderate limitation to dorsi and plantar flexion, but eversion and inversion were practically absent. X-rays showed an old united, inverted Pott's fracture with inward displacement and tilting of the astragalus (Figure 5 (A)).

In February, 1923, an osteotomy of the fibula was done, and the alignment of the foot corrected and a plaster splint applied. Immobilization was continued for about seven weeks, and subsequently physiotherapy instituted. In June all treatment was discontinued, and the patient attempted to return to his employment. At that time he exhibited good motion in the ankle-joint, with the exception of slight limitation to inversion and eversion, and the weight-bearing alignment was satisfactory. In August he returned to the office, stating that he still had some pain. Examination showed some tenderness over the internal malleolus. The pain was especially noticeable in cold or damp weather, and was considered that very probably he had a moderate arthritis of the ankle-joint. A foot-plate gave him considerable relief, and he subse-



Figure 5 (A)

Figure 5 (B)

Figure 5. (A) Inverted Pott's fracture with inward and forward dislocation of the astragalus. (Case IV.)

(B) Correction of weight-bearing alignment following osteotomy of the fibula.



quently returned to his employment. When last heard from he complained of some pain in the ankle-joint during cold or damp weather, or following excessive walking. (See Figure 5 (B)).

#### DISCUSSION

E. W. CLEARY, M. D. (177 Post Street, San Francisco)—I have read with interest and profit Doctor Prince's painstaking analysis of this very important group of fractures. So completely has he covered the subject that not much is left to be said.

Fractures involving the major weight-bearing joints carry always the possibility of such serious crippling that the surgeon confronted with such an injury should be at once upon his mettle.

In fractures about the ankle, particularly the distortion produced at the moment of injury, rarely persists until the patient reaches the surgeon. Either through the strong natural tendency of the tissues to return to a normal relation or to the immediate interference of someone who happens to be on the ground, a partial reduction occurs before the surgeon appears on the scene. For this reason, it sometimes happens that the extent of the lesion is underestimated and the surgeon fails to visualize the degree, as well as the direction of primary distortion. He may, on this account, fail in his manipulations to secure reduction, because he does not "unlock" tissues by the important maneuver of reproducing the primary distortion and beginning the reduction from that point.

Many of these so-called fractures are really combinations of fractures and dislocations, and the attendant ligamentous lesions are a very significant factor. I recall the startling degree of ligamentous tearing, which I found present in the first extensively compounded fracture involving the ankle-joint which fell into my hands. Seeing the torn ligaments is very impressive, but it is well to bear in mind that the tearing may be just as extensive, though the elastic skin remains intact. Good bony reposition may be obtained, by manipulation, a considerable time after injury, even after primary swelling has subsided, but a good restoration of badly torn ligaments is usually not possible unless the reduction is completed very early.

H. D. BARNARD, M. D. (2417 South Hope Street, Los Angeles)—In a number of fractures about the ankle I have encountered cases which presented marked disturbance of the normal relationship of the leg alignment prior to the fracture, the mortise of the ankle being rotated outward up to as much as 40 degrees or more from its normal relation to the knee-joint. This resulted, as was pointed out several years ago by Hoke and others, in the ankle-joint operating in one plane and the knee-joint in another, despite the fact that they are joints superimposed upon one another, and to obtain the greatest possible mechanical efficiency should operate in the same plane.

I have several times wondered, in inspecting these cases as they present themselves as a final after-result, as to whether one would be justified in attempting to reduce any of these torsion deformities of the limb at the time of reduction of the fracture. I mention this consideration only to emphasize the opinion expressed by Prince that the most accurate anatomical reposition of the relationship prior to fracture is to be most desired.

The surgeon is not justified in being influenced by the presence of rotation deformities prior to fracture from this one main factor, proper attention to which is so essential to success.

A small percentage of these fractures yield an unsatisfactory final result, apparently, when all of the essential factors as enumerated by Prince have been carefully carried out. The pathology in these unsatisfactory cases is probably similar to the cases of prolonged painful feet, following tarsal fractures involving the subastragaloid joint. Disturbances in the normal contour of the joint surfaces, involving the sliding mechanisms, probably remain uncorrected to some extent even in the hands of the most expert. The persistence of pain and disturbance in the tarsal fractures, involving the subastragaloid joint over such a long period of time, has been my reason for

adopting as a routine the arthrodesing operation through the subastragaloid articulation.

Unfortunately, a similar answer cannot be applied to the persistent painful after-results of the type of fracture under discussion by Prince. I heartily concur with the author in the belief that the open operative procedures are indicated in cases of fractures about the ankle followed by union in malalignment.

#### ACRODYNIA

A. J. SCOTT, JR.\*

DISCUSSION by William Palmer Lucas, San Francisco; Robert G. Sharp, San Diego; Clifford D. Sweet, Oakland.

ACRODYNIA, known also in Australia as the "pink disease," is not very common anywhere. A few sporadic cases have been reported from different localities, but none from Southern California. It has been known in France since 1828, where it was epidemic for two years, and around fifty thousand persons were affected. Acrodynia has been confused with pellagra, but careful study has differentiated the two diseases.

In this country, J. D. Bilderback was the first to describe the condition; followed later by William Weston and Albert H. Byfield, and John Zahorsky has discussed a number of these cases. Following the work of these men, case reports have come in from various parts of the country. (For a complete account of the early history and bibliography, see Abt's System of Pediatrics, Vol. II, p. 986.)

The consensus of opinion is that there is no specific etiology of acrodynia, but it is probably infectious and not contagious. The disease runs its course, from a few weeks to several months, with remissions and exacerbations.

The following case report with pictures was submitted to Drs. Bilderback, Weston, and Zahorsky.

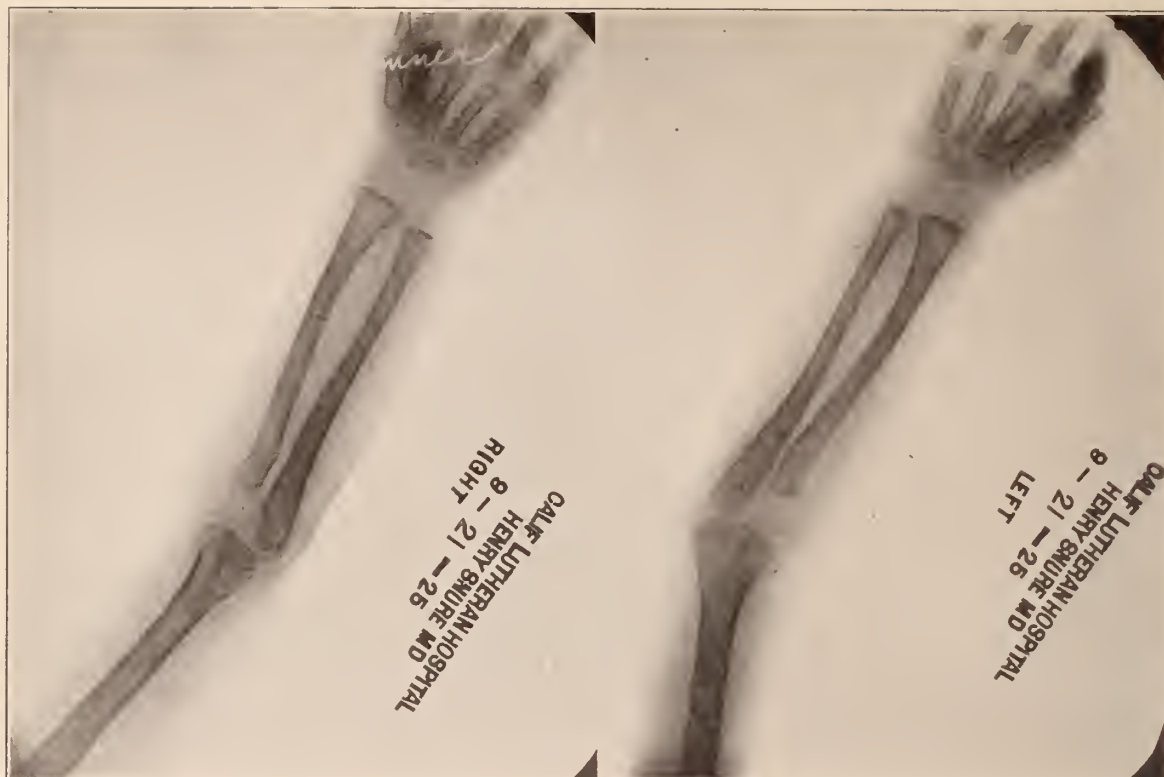
Dr. Bilderback wrote: "This is undoubtedly a case of acrodynia. I shall be glad to keep the report of this case."

Dr. Weston wrote: "I unreservedly concur in your diagnosis that this is a case of acrodynia. I base my opinion upon the blood findings, the nature and situation of the rash, the desquamation and sweats, the stomatitis and bleeding gums, the marked restlessness, nervousness and insomnia, loss of appetite, and I would judge from the photographs that photophobia is present. In considering acrodynia, we must not lose sight of the fact that it is a protean disease, presenting in different localities and at different seasons very different types of symptoms. This observation was made by the French authors in the early epidemics observed in France, and has since been observed in Australia, New Zealand, the West Indies, and the United States."

#### CASE REPORT

A male of 19 months; the second child; a normal delivery; birth weight, 9¾ pounds; breast-fed, nine months.

\* A. J. Scott, Jr. (1401 South Hope Street, Los Angeles). M.D. University of California (Los Angeles Department), 1909. Practice limited to Pediatrics. Hospital connections: Los Angeles General, California-Lutheran, Anita M. Baldwin, Hollywood, and White Memorial hospitals. Appointments: Member California State Board of Health; Professor Clinical Pediatrics, College of Medical Evangelists, Los Angeles. Scientific organizations; Member of Los Angeles Obstetrical Society; Southwestern Pediatric Society; Fellow of the American College of Physicians. Publications: Several articles in state and national medical journals.



There is a history of lues in the family which otherwise has no bearing on the present condition.

The patient was first admitted April 22, 1925, because "he did not sleep well." He had a good appetite, and bowels were regular. His disposition was good. Physical examination that date showed a normal boy with clean skin and firm muscles; body weight, 27½ pounds; height, 32 inches; temperature, 98.6. May 5, 1925, the child was brought into the skin department with a rash on the abdomen and back, which was diagnosed as a toxic rash. His temperature was 99, and the weight 26¼ pounds, a loss of 1¼ pounds since previous visit.

May 18, 1925, the skin department reported a sparsely generalized punctate or blotchy macular rash with desquamation of palms and soles, and abdomen somewhat tender. The boy was referred to the medical division with a temperature of 100, and a history that this condition began six weeks previously with an eruption, first on the abdomen and then on the back, of small red papules; about one week later it started on the soles of the feet as large blebs. The feet began to desquamate, leaving a reddened base with minute vesicles and desquamating areas. There was very little fever. The child was cross and nervous. Sweating started two weeks before our examination, and sleep was poor. Three days before seeing us he had been stuporous, and had a tendency to throw his head backward. The history shows that prior to the present trouble there was a fondness for apples, water of vegetables cooked in closed vessel, and one or two soft-cooked eggs daily. Three days before the child had been taken off milk and given orange juice and meat broths, with improvement of the skin. On June 4, 1925, his temperature was 98, and the weight 23¾ pounds. Feet were still itchy, but not perspiring as much. Hands very much the same. No bleeding of the gums and no stomatitis. Was not sleeping well at night. Appetite was better. Hands and feet were cold, desquamation continuing. The child was very listless and irritable, and did not like being handled. Crawled around on the bed, seeming to find difficulty in finding a comfortable position. Would not eat anything except orange juice and milk. On June 11, 1925, the temperature was 98.6; weight, 22½ pounds. Hands and feet were improved. The rash was clearing. Stomatitis still present, but gums were not bleeding. Mother said she had noticed some blood. Two days before, the baby

passed some fine sand from the bladder. Bowels were normal, and appetite improved. Had slept better the last two nights, but the mouth condition had disturbed him. Ordered chlorate of potash mouth wash after meals. On June 25, 1925, the temperature was 100.4, and the weight 21 pounds 14 ounces. Sleep was poor. Bowels somewhat costive, requiring enemas. The appetite was poor, would drink only milk and not eat. He gritted his teeth. Was nervous and restless at night. Had one sore in mouth, but gums were not bleeding. He was getting very emaciated. Ordered syrup hydriodic acid, fifteen drops three times a day.

The child then dropped from sight because they lived out of town, and some weeks later our social service department called to find out the reason for not returning. The mother stated she had taken him to an osteopath for four weeks with a gradual losing of ground, then to a chiropractor who gave quartz-light treatments and orange juice; then because of a developing pulmonary edema and suppression of the urine, called in Dr. J. J. Allen, who relieved the acute edema and started the kidneys to functioning; then began hypodermics of iron every other day and a diet of sweet milk, eggs, and brown bread toasted hard. The boy gained three pounds in two weeks, and on the stopping of iron gained only one-quarter pound in three weeks; on starting iron again he gained one-half pound a week. The diet was increased, and on September 21, 1925, he was brought back to the clinic. He was sleeping well. Bowels were moving daily. Had a good appetite, and was stronger. His body was practically clean, though the hands were still a little rough and itched some.

On April 4, 1925, Wassermann negative. On June 4, 1925, blood count: leukocytes per c. mm. 13,200; small lymphocytes, 45.5 per cent; large mononuclears, 2.5 per cent. Polynuclear: neutrophils, 52 per cent.

On September 21, 1925, x-ray report, as follows: X-ray of knees, ankles, wrist, and elbows show no definite abnormality. There seems to be lack of calcium content in the bones extending for one-half to one inch from joint surfaces, not very marked, however. Ossification centers are normal for twenty-three months, except possibly that of the lower epiphysis of radius on right side, which is not present. Left one sharply defined; time for appearance of this center is given by most authors as two years





\* The horizontal line is the result of folding of the radiograph.

of age. Isadore Cohen states his experience is that they appear the first year.

**Treatment**—The sustaining of strength and good nutrition, and the allaying of the intolerable itching, are the most important factors in treatment. There is no specific therapy. What one man thinks helps or cures one patient may have no effect on another. Rodda reports that tonsillectomies result in improvement in these patients, and Sweet uses quartz light. We noted improvement some weeks and not in others. After his severe relapse when under the care of the osteopath and chiropractor, Allen got good results by iron injections. This may be merely a coincidence, but well worth considering.

## DISCUSSION

WILLIAM PALMER LUCAS, M. D. (490 Post Street, San Francisco)—During the past ten years, the attention of the medical world has frequently been called to new symptom complexes. Some of these have later been shown to be reappearances of diseases which had been dormant for some time, but under favorable circumstances burst out in epidemic fashion. Such, for example, are influenza and epidemic encephalitis. Other symptom complexes which are apparently without previous recognition must be accepted as new disease entities. The reports of Longcope, and Sprunt and Evans, on infectious mononucleosis would indicate a hitherto undescribed disease.

Since 1920, the American literature has contained reports of the disease syndrome called by Weston, "acrodynia." Swift of Australia, however, reported in 1914 a similar condition, which he called "erythroedema." Patterson and Greenfield state that the disease had been seen frequently in England prior to 1914. Its similarity to a disease occurring in Europe in 1828 is now admitted. Various names have been applied to the condition; that most generally accepted in the United States has been "acrodynia," which describes one of the symptoms, but one which might not always be acceptable. A more descriptive terminology would be that applied by Patterson and Greenfield, "erythroedema polynneuritis," as it emphasizes the underlying pathology.

The value of individual reports is in tracing the geographical and climatic distribution. To our knowledge, cases have not been recognized as such in Southern California, although several patients have been seen around the San Francisco Bay region. Dr. Scott's report adds to our conviction that the disease has a widespread distribution. Whereas many of the cases previously reported have had a history of respiratory infection preceding, this case is without such a history. The rest of the clinical picture is classical.

ROBERT G. SHARP, M. D. (420 Walnut Street, San Diego)—While I, in nowise feel qualified to discuss acrodynia, except to comment on the rarity of its occurrence in southern California, I do feel entirely competent to commend Dr. Scott's paper in its entirety and to comment most favorably upon his report of this rare condition. I am heartily in accord with such reports. I am positive that we get enough and see enough of the ordinary stuff and believe that we keep ourselves up to date, alive, and progressive through refreshing our memories by the study of just such rare conditions as Scott has reported.

That acrodynia is rare in Southern California, I feel sure will be admitted without question. To its rarity in some parts of France, at least at certain times, I can also attest. During the war, I saw all of the hospital cases selected out of over a hundred thousand dispensary children from a population of between five hundred thousand and seven hundred thousand. This covered a period of twelve months. No cases of acrodynia was recognized among these children.

There have come under my personal care here in San Diego over six thousand children since the war, among which, I am also positive, no such cases have presented themselves. That I could not have overlooked a case of acrodynia seems certain to me, as I have had during





this time most clearly in mind the perfectly typical case presented by Dr. Lucas at the University of California Hospital. The picture was so striking, and the impression made upon me so vivid, that, to use the oft-quoted phrase from Weston's description, "such a picture of abject misery once seen will never be forgotten."

Most interesting is Rodda's report on the favorable effect tonsillectomies have in these cases. Apparently, all the writers are agreed that the condition of acrodynia is the result of an upper respiratory tract infection probably focalized in the tonsils and adenoids. At least, this is what I glean from the reports of Giffen, Squires, Sweet, and Rodda. I failed to find in any of the reports whether the quartz-light therapy had been used directly on the infected tonsils. Sweet, of course, reports that the whole of the body was exposed to the rays of the mercury vapor quartz lamp. It would be interesting to determine whether or not the quartz-light therapy, applied locally to the infected tonsils, might take the place of the tonsillectomies. Dr. Rodda's comment along this line would be worth while.

I thank Dr. Scott most heartily for calling my attention to the fact that acrodynia has occurred in Southern California, and I promise him that I will keep both eyes open and report immediately should any suspicious case come under my observation here in San Diego.

CLIFFORD SWEET, M.D. (242 Moss Avenue, Oakland, California)—Because I have seen but four cases of acrodynia, two of these through the courtesy of colleagues, I can add no discussion based on extensive personal experience. However, I feel that photophobia should be stressed as the symptom usually presented in such striking manner that one is led to think of this condition in making a differential diagnosis. Also if the teeth have erupted, looseness or actual loss of these organs may be the reason for seeking medical advice. At present we have a child under observation and quartz-light treatment, because of a very acute photophobia following an acute upper respiratory infection—no other symptom, except a constant desire to remain in bed, being present.

DOCTOR SCOTT (closing)—I wish to thank the doctors who have discussed this paper.

At the meeting of the Southwestern Pediatric Society on January 6, 1926, at which time this paper was presented, the discussion brought forth some new cases that had been seen recently but not reported—one case by Dr. Saphro; one by Dr. Berkley, and two from Long Beach, by Dr. Bliss, which shows that the condition is not as rare as it might appear to be.

Six points in the diagnosis have been mentioned by one of the Australian men, and they are the predominating symptoms: 1. Pain. 2. Pink hands. 3. Peeling. 4. Prostration. 5. Paresthesia. 6. Perspiration.

**Opposition to Treatment by a Corporation**—The Medical Society of the County of New York unanimously adopted the following resolution, May 24:

Whereas, It has come to the attention of this society that the New York Tuberculosis Association, Inc., as an inducement to obtain additional members therein, has made the following representations to the public, to wit:

"The New York Tuberculosis and Health Association, Inc., offers free information and advice on all health problems and expert chest examination with x-ray facilities at cost to employees of offices, stores and factories—arrangements made for placement in suitable institutions when necessary"; and

Whereas, It is understood that Mr. Harry O. Hopkins, director of the Association, has stated that the price of the expert chest examination with x-ray facilities is to be \$15; and

Whereas, a Corporation is expressly forbidden to practice medicine by the laws of the state of New York; and

Whereas, Said representation made to the public leaves the cost of such proposed treatment vague and uncertain, although known to the association; and

Whereas, Such treatment, stated to be at cost, is to be given to a group of employees, irrespective of their ability to pay therefor, many of whom can readily afford to obtain such advice and treatment from their family physicians; and

Whereas, No provision is contained in such proposal to limit such treatment and advice to those persons referred to the Association by practicing physicians; and

Whereas, In the opinion of this society, such proposal, if carried out as made, would not be to the best interests of the profession or of the public; now, therefore, be it

Resolved, That the Medical Society of the County of New York is opposed to and protests against the carrying out of such proposal as made by the New York Tuberculosis and Health Association, Inc.

"A healthy mind in a healthy body" is the new slogan. But are good minds necessarily domiciled in healthy bodies? The history of the race does not prove it. There is something about a healthy body, apparently, that does not lure a good mind. It is probably too healthy. No; you cannot sort out intelligence by physical symmetry.—Clarence Darrow, *American Mercury*, June, 1926.



## THE PRESENT STATUS OF THE TREATMENT OF SEXUAL IMPOTENCE \*

By VICTOR G. VECKI, M. D., *San Francisco*

THE influence of the sexual power upon individual happiness and usefulness is tremendous. Efforts at sublimation show poor results.

Premature senility and early sexual weakness are almost synonymous. Both degrade and abolish resistance to sickness, finally to death.

Senility is due to an increase of connective tissue cells to the detriment of epithelial or functional cells.

Among the causes of impotence age ranks first, but years alone must not be considered. There is no age limit to sexual power and there is no age where impotence may not appear.

Next in frequency causing impotence are various congenital and acquired conditions of hypo- and hyper-functioning glands of internal secretion. Then come the various congenital and acquired pathological conditions of the sexual organs. The study of endocrinology has explained many congenital deformities.

Virility has a host of enemies. The list is long, never complete. Every debilitating condition impairs sexual power.

Neurasthenia, formerly considered a frequent cause of impotence, is now less in evidence. Most neurasthenic conditions are explained by glandular insufficiency or by local pathology, which formerly could not be demonstrated.

No rational, effective treatment can be devised before the patient submits to a thorough examination. The physician cannot take the chance to prescribe stimulants or give local treatments to a man who, complaining of impotence, in reality suffers from some fatal disease.

We must know the patient's age, occupation, family and personal history, past and present mode of living, exact history of the past and present sexual life and habits. The condition of the skin, the nervous, the circulatory, the respiratory and the digestive organs must be ascertained, finally, the genito-urinary organs must be inspected.

To the experienced eye the general appearance of the external genital organs may reveal a great deal. Anyone not familiar with the necessary instrumentation should not pass final judgment in any of these usually complicated cases.

The blood pressure must be considered, as frequently sexual neurasthenia is associated with abnormally low or high blood pressure.

The treatment of impotence was a distressing undertaking until study brought out increased knowledge of endocrinology and organotherapy.

The use of some internal remedy may be indicated and sufficient in some cases. The so-called aphrodisiacs sometimes accomplish something. Iron, arsenic and mainly large doses of strychnine may give results. Atropin, cautiously used, may help in some conditions, combined with some purgative may have surprisingly good results in cases of autointoxication. Narcotics should not be used, while instillations of a drop or two of novocain into the meatus

against premature ejaculation is fairly safe. Alcohol is indispensable in frigidity and premature ejaculation.

No matter what drug may be employed, in the great majority of cases simultaneous feeding of desiccated glands of internal secretion is indicated. Either thyroid alone or in combination with suprarenal, pituitary, gonads and hemoglobin. Small doses should be used over a long period. The patient, however, must be constantly watched, the influence of the opotherapeutic preparations upon well-being, weight and mainly upon the blood pressure must be controlled.

In cases resisting internal opotherapy, intramuscular and intravenous injections are to be applied, but only proper material freshly prepared will do. Almost constantly good results are obtained by subcutaneous implantations as devised by Stanley.

While it is now fully established that real testicular transplantation gives very good results, only human glands or those of anthropoid apes can be used, and the difficulties of obtaining them are mostly insurmountable.

The properly performed Steinach operation prevents a premature ceasing of the internal secretory function of the testicle and frequently re-establishes such function after it was almost extinct. In some cases of premature ejaculation it is the supreme remedy, but is not absolutely necessary to treat most varieties of impotence; simpler remedies will mostly do.

Bad and unhygienic habits must be corrected, the diet regulated, the intestinal tract kept clean and in spite of all difficulties the sexual life must be regulated. Ultra-violet rays are sometimes useful, psychotherapy never to be neglected.

It should always be endeavored and it is always possible to lighten the burden of onmarching and encroaching years, but there is no short road to success in the fight against senility and its twin brother, sexual impotence.

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If some fully informed and competent person could put his finger on the pulse of this world and tell us how it is, the information so given would be welcomed in many quarters. One does not necessarily notice it as he walks abroad, but it is a fact that doubt exists in considerable quantity whether human life just now is progressing toward better conditions or worse ones. It is moving, and the impression is very general that we are at the beginning of a new age. There is a horrid suspicion, and quite well diffused, that the present population of this world has not got average sense enough to be used just as it is in peopling the new age, and that it may be necessary to get rid of quite a bit of it. It must be the consideration of that necessity which makes people anxious.—Edward S. Martin, *Harpers' Magazine*.

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The failure of prohibition in many sections of the country is at least halting the moral reformers of America in the agitation of further efforts through statutory enactment to impose their own standards upon all men and invoke the aid of the civil authority in support of their own ethical code. An increasing number of people has begun to see that moral reform, if it is to be permanent and effective, must come from within; it cannot be imposed from without.—The Rt. Rev. Charles Fiske, D. D., *Harpers' Magazine*, May, 1926.

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\*Author's abstract of a paper read by Victor G. Vecki at the Fifty-fifth Annual Meeting of the California Medical Society, held at Oakland, April 26 to May 1, 1926.

The only males in this era who boss the household are under 3 years of age.—*St. Joseph News-Press*.



## NEUROSIS OF THE CONDEMNED:

## A CLINICAL SYNDROME †

REPORT OF A CASE

By JOSEPH CATTON \*

CERTAIN factors may precipitate a neurosis in a predisposed individual. In certain cases impending death at the hands of the state is the one new, precipitating, exciting and proximate cause in the development of a neurosis. Predisposing factors have been present over a number of years; the stresses incident to commission of crime, arrest, trial, prison, and the rest, have each and all of them been previously experienced, but with no neurosis production. Then comes the verdict, "guilty of murder," the sentence of death and apparently inevitable execution. The last factor determines the upset.

The "neurosis of the condemned" is a functional nervous affection precipitated in a predisposed individual by impending legal execution.

This neurosis may be made up of hysterical, neurasthenic, psychasthenic, hypochondriacal, and other symptoms. It characteristically has associated with it a set of malingered symptoms. Indeed it may have much of its genesis in these initially fraudulent symptoms. Among the contributors to the development of this disease picture are the legal administrative delays between passing of sentence and execution; and the repeated conscious or unconscious suggestions of attorneys, physicians, and others which aid or produce malingered and neurotic symptoms. It is my judgment that the neurosis may be cured fairly promptly by the sole therapy of commutation of sentence.

The final steps leading to the production of this neurosis are psychogenic; partially conscious and partially not conscious. The subject finds himself in the most intolerable situation; his most fundamental instinct is being worked upon; facing practically certain death, his self-preserving faculties of both conscious and not conscious realms are activated. He may reach an adjustment, so far as external be-

havior is concerned. He may collapse physically and mentally in the face of the insurmountable. The fear-flight processes may be set in operation or the anger-fight. These various possible responses were seen each in goodly number in the war neuroses. In battle there was the fear of impending death, but there was the chance to fight and the chance to survive. In the case of the prisoner facing execution, little opportunity is given for the "fight" expression; one does see violent outbursts on occasions and attempts at escape. A surprisingly large number pass through the whole adventure with an apparent stoicism, with or without the psychotherapy of religious comfort. Some there are who collapse. A number, however, show behavior related in great measure to fear-flight responses; and such behavior may be consciously or unconsciously motivated. Where the behavior is voluntary, one may see malingered insanity; where unconsciously directed, one sees the neurosis.

The conditions which have been described as prison psychoses are of common occurrence. Definite clinical syndromes may develop in the presence of the physical and mental stresses related to trial, imprisonment, punishment, and the rest. These mental disturbances vary all the way from mild and ill-defined groups of symptoms, to actual neurotic and psychotic syndromes. Some of these neuroses and psychoses are similar to those which might have developed in the same individuals under other stressful circumstances. On the other hand, certain of these disturbed mental states are peculiarly due to crime and punishment factors and the symptom pictures reflect these factors.

There is much literature on the subject of prison psychoses; also there is much confusion as to their nature and their nomenclature. One sees the same or similar clinical pictures referred to as: acute prison psychoses, hysterical states, hysterical twilight states, hysterical stupor, twilight states, the Ganser syndrome, the Ganser twilight syndrome, catatonic states of degenerates, etc. In the preceding paragraph it may be noted that there is no one term which may designate all of the various mental upsets that may occur in prison.

A most important point in the diagnosis of these states is the differentiation of psychoses, neuroses, and malingered states, one from another, for immediately obvious reasons. An intangible psychopathy must not be brought forward as the genesis of all fraudulent mental disturbance, and the antisocial criminal be thus excused for his crime. Likewise a transient neurosis must not be misdiagnosed a psychosis.

Following the individual diagnosis, a medico-social diagnosis must be made. There must be some standard of social responsibility. Physicians should be fully informed in the matter, and should not be open to the criticism that they have found the roots of all malingering and all crimes in psychopathy. If the latter stand is to be tenable, one should recognize two types of psychopathy: one which includes even the slightest variations from normal average mental health; and a second which designates a psychopathy which in quality and quantity deter-

† Chairman's address at the Fifty-fifth Meeting of the California Medical Association, Neuropsychiatry Section.

\* Joseph Catton (209 Post Street, San Francisco). M. D. University California, 1913; B. S. University California, 1911. Practice limited to Neuropsychiatry and Alienism. Present hospital connections: Lane and Stanford University hospitals. Previous honors and services: Teaching staff University California Medical; Chief of Medicine San Francisco Polyclinic; Medical Department Stanford University, Major M. C.; Past President California Institute, American Institute Criminal Law and Criminology; Executive Committee California Society Mental Hygiene. Scientific organizations: San Francisco County Medical Association; American Medical Association; Academy of Medicine, San Francisco; San Francisco Neurological Society. Present appointments: Assistant Clinical Professor Medicine, Neuropsychiatry, Stanford Medical School; Consultant Mental and Nervous Diseases, U. S. Veterans' Bureau, and U. S. Employees' Compensation Commission. Publications: Post Mortem Reflexes (J. A. M. A., 1915); Studies of Spinal Fluid During Iodide Medication by Mouth (J. A. M. A., 1916); Leukopenia, Its Relation to Neuralgia (Calif. State J. Med., 1916); Malingering, Its Diagnosis and Significance (Calif. State Med. J., 1917); Gas Warfare, Its Aftermath (Military Surgeon, 1919); Malingering (Military Surgeon, 1919); Malingering, Its Relation to the Doctor (Calif. State J. Med., 1920); Trauma, Relation to Nervous Diseases of Undermined Pathology (Calif. State J. Med., 1921); Post-traumatic Neuroses; Their Mechanism (Calif. State J. Med., 1921); Post-traumatic Neuroses, Psychotherapy of (Med. Clinics of N. Amer., 1923); Adult Delinquency, Its Prevention by Mental Hygiene in Childhood (Calif. and West. Med., Feb. 1925).

mines frank irresponsibility, inability to comprehend a trial and defend oneself; or which precludes punishment.

I am quite aware that there is a rather widespread opinion that, with increasing age and training and experience and understanding, a physician is less and less likely to diagnose malingered insanity. I am well aware of the current opinion that the very assumption of an abnormal behavior indicates psychopathy. I am fully convinced, however, that there are definite cases of malingered insanity; and I choose not to beg a question of relation of malingered to psychopathy, by finding that the feigning itself indicates mental disorder. How similar the opinion that the major crimes are themselves indicators of a psychopathy which should excuse them! Such attitudes of mind are dangerous to society. They would dictate the opening wide of the doors of our prisons, and the caring for our "sick" offenders in ways we know not, and by time, money, energies and abilities we have not!

I have yet to read or to hear an accurate explanation made of what is meant when one states "the simulation of insanity is rare." I have referred to my records of twelve recent murder cases in which insanity was claimed; my studies of these persons indicated that actual psychoses were present in but two of the twelve, and some psychopathy in two others; in the remaining eight, insanity was simulated on behalf of the prisoner by the attorney defending him, and *in two cases the prisoner himself simulated insanity*. Here are two cases (16.6 per cent) of malingered insanity in twelve consecutive, unselected cases, in which it was my fortune to have made examinations and to have given opinion.

Recently I appeared at the trial of J. J. E., a person found guilty and sentenced on account of violation of the corporate securities act. I was his witness, and my findings led to my testifying that he had a prison neurosis. He, his family, and his attorneys alleged that he was insane, and a motion was before the Superior Court on that issue. I testified further that it was my opinion that the symptoms would entirely disappear in about three months, with the subject's adjustment to his prison life. In a recent trial I heard J. J. E. testify in another matter. The district attorney cross-examining E. asked him concerning his, E.'s, previous allegation of insanity, and E. responded that he had fully recovered from his mental disturbance and that it had been due to his not being acclimated to prison life. The physician forming an opinion in these cases should not make a cross-section diagnosis, but a longitudinal one; the latter bears most definite relations to the social aspects of the case, e. g., responsibility, punishability, etc.

Recently, on behalf of the people, I examined an embezzler, P. J. I., and found him to show a frankly abnormal mental state. In my opinion certain aspects of his behavior were assumed, and others formed a dementia-precox-like prison psychosis. With the finding of the jury that the man was sane in the triability sense, there came a complete change in behavior. Residence in psychopathic ward was discontinued; neck tie was pulled back in line,

clothes became clean and face became shaven; blank expression of face, stare of eyes, and stupid attitude disappeared; he again recognized his acquaintances; it has been rumored that his attorney left him thinking him a fakir; he came into court, and in every way an average prisoner at bar, pleaded guilty and asked for probation. During the past several months he has been attempting to make good to his accusers.

How easy in these cases one might read a psychopathy out of the disturbed behavior, and further a psychopathy which would excuse crime. Then would come a short hospitalization, and next freedom. Meanwhile, nothing would have been done to restore to those who could ill afford to lose their money, several hundred thousands of dollars! The cases just mentioned were related to crimes against property. They have their counterparts in crimes against morals and in crimes against the person. Most important, these behavior disturbances are found in those guilty of murder. My paper deals more particularly with this latter crime, and it asks the doctor to guard carefully against malingered abnormal behavior which might lead to escape from punishment or custody; and to properly evaluate automatically simulated attempts at escape from punishment or execution by the neurosis route.

#### REPORT OF A CASE OF NEUROSIS OF THE CONDEMNED

The case report which follows is that of Felix Sloper, the murderer of Officer Campbell of the San Francisco police force, and now under sentence to be hanged. Sloper has malingered abnormal mental behavior; he has attempted the simulation of insanity; and his simulation in a measurable degree has been unconsciously motivated, and has led to the development of the neurosis of the condemned.

Sloper had the predisposition necessary for a malingered, neurotic or psychotic outbreak, between sentence and execution. His father was a drinker; once his excessive drinking had led to a short stay in a state hospital. Sloper was rather thin, stooped, round-shouldered, undernourished, and with high, arched palate, and narrow chest at base. He had had at various times a positive blood Wassermann. There had been, however, no clinical signs of either congenital or acquired syphilis; the patient denied any initial lesion. The spinal fluid showed a cell count of 10 to one examiner; the globulin, gold curve, Wassermann, and other findings were normal. Sloper had early become a social and anti-social; already before his twelfth year he had had many small offenses to his credit. He was in and out of the reform school from 12 to 21 years of age. He served time in state prison for burglary; and had had probation and parole experience. His physical and neurological examinations were at all times negative.

Sloper had had brought to bear on him all of the various physical and psychological stresses which might have precipitated a prison neurosis or psychosis. However, no such condition had ever developed during his trials or his incarceration in reformatory or prison.

Sloper, in early 1925, was interrupted in the



course of his robbing a bank in San Francisco. Officer Campbell entered the bank and asked what was going on, and was answered by two shots from Sloper's pistol. The officer died. Sloper was arrested, confessed; but stated he had killed the officer in self-defense. Sloper's abnormal behavior developed only after he had been found guilty of murder. Then came evidences of the feigning of insanity and the presence of a neurosis.

In May, 1925, just previous to his trial for murder, my studies of Sloper indicated no mental disorder. Mental rating, together with his entire examination, indicated to me that he was of normal intelligence. I was satisfied with his responses to Terman scale testing from three years through fifteen years, and adult tests. Likewise, I found him to think rapidly; to explain self without difficulty; to always understand and give attention to the matter at hand, and not go off on side issues; not to engage in idle chatter or talking; to find terms and words readily to express himself; to make free use of past experiences to interpret new situations. I found him to be able to relate to me in detail the circumstances leading up to the crime, the crime itself, and the events which followed; to be able to give me his own orientation to the crime. He fully comprehended inherent and legal excuses for taking human life, and the eventualities when human life might be taken under other circumstances. He discussed fully the charge against him, his trial, the possible outcome, and his attorneys, the expense of trial, witnesses, etc. I found no evidence of neurosis or psychosis. One thoroughly competent examiner called by the defense found a mental rating of 8 years 8 months. This examiner realizes with me, however, that Sloper knew at the time he was being tested that the examination was not for a raise in pay or a promotion, but rather might help him to escape execution. The prisoner's co-operation, and the rest, under the circumstances might be accurately predicated.

During the many months of delay following sentence the usual appeals, etc., were made, and without avail. The prisoner now began to realize that legal hanging was no respecter of self-preservation urges. He began to manifest more and more a behavior which might be his one chance of escape. He could deal with the matter of his impending death in but one direct way, and that was to take his own life; his decision did not run in that direction. He could not run away. He did plan and attempt an escape; also he did try to organize a jail break. Then came the indirect ways, through simulation. Sloper voluntarily assumed certain types of conduct which might aid him; and Sloper's mental mechanisms aided him further by involuntary neurosis production.

Sloper now found himself about to be resentenced to death, the upper court having sustained the findings of the lower court. His attorneys attempted to intercept the pronouncement of this judgment by a motion that Sloper should now be tried as to his present sanity.

Sloper's general appearance at the present time might indicate that he had lost much weight; it had

been alleged that he had eaten little and slept little; once there had been an apparent hunger strike. Unshaved, stooped and with hanging jaw and staring eyes, his nutrition appeared to have suffered. But he had been noted to get plenty of sleep during the days; food had been seen in his cell at other than meal times, and later it would have disappeared. There had been a slight loss of weight (by the scale) at the time of his "hunger strike"; but his actual weight at this time was the same as the day he was arrested for killing the officer. Persistent refraining from eating and continuing loss of sleep are not compatible with no loss of weight.

Sloper now meets a man in the hall of the jail; it is his brother; he appears not to fully recognize him. There was some lighting up of face at the meeting. The brother testified that he found Felix on all of his other visits during the year to appear and act in a sane manner and to fully recognize him. Sloper recognized various jailers, Doctor O'Neill, his sister, and various others. He recognized his attorneys and his trial judge, whom he called "Judge Buck" (actually Judge Louderback). He appeared not to recognize me on recent examinations. However, a year ago, following my prolonged study of him and his full co-operation, I had addressed him in the men's room during a court recess and he said, "Have I seen you before?"

Sloper, when pricked with a pin on a region of his body where he might give attention to what was going on, would show no indication that the pin prick bothered him. When given a sudden jab in a portion of the body, for example, his back, where he could not anticipate it, he would give a jump. Sloper spat on the floor during one of my examinations and rubbed his finger in it, and showed it to me and one of the jailers. An inspection of his cell failed to show any sputum or other excreta on the floor, and showed a reasonably clean wash bowl, and a not very disorderly bed. Sloper had a habit of picking at a portion of his face until he could get a very small amount of blood to ooze therefrom by pressure; then he would anoint the tip of each of his fingers with same and demonstrate to myself or his jailers.

Sloper was said to have attempted suicide. Once he placed a foot on the railing of a balcony, but was pulled back by a guard. On another occasion he had climbed up two tiers of cells; but at these times he did not jump or allow himself to fall. He had materials in his cell with which he could have hung himself had he so desired. He started a fire in his cell, but he himself kept away from the fire. During the trial this point was testified to in his hearing. Before the next court session he started another fire in his cell, and when the guards reached the scene Sloper once more was not in contact with the fire. Examination, however, showed him to have singed his hair on the right side and to have had fire near enough to the side of his face to slightly redden it.

He was seen most of the time to have a stare to his eyes. When observed without his knowledge, in his cell, the stare was absent. It was likewise absent during several minutes consumed by his drawing a picture for me. It was practically absent during



court recess, at which time he stood in an anteroom, partly away from a group of prisoners who had been testifying as to his sanity. Consistently, during court sessions, Sloper would stare when his face was up; but his position of choice was with face down, and his eye slits were normally narrowed and his eyes were not staring.

At the time of his arrest Sloper already carried his back arched slightly forward. As the months went by he walked with more of a bend. Also, he began at times to take up a position in which he sat with buttocks on heels, elbows on knees, and with hands held forward or on chin, or playing with hair, eyebrows, or face. He would raise his face and look from side to side and with eyes staring; then he would face the floor and lose the stare. When observed secretly in his cell this position, as described, might give way to more usual attitudes. Likewise, during certain of my examinations which dealt with the possibility of a prison sentence or a hospital stay replacing hanging, he assumed more average attitude. During the court recess above referred to, the patient stood quite erect in the anteroom. Certain of the staring and the attitudes and other findings I feel had in a measure gotten beyond the purely voluntary state and were hysterically motivated.

Sloper's speech and conversation seldom lost their relevancy. Very rarely they were some unintelligible mumbblings. More often there would be a "Huh" or a "What." Also quite spontaneously during court proceedings he might state, "I don't want a trial—Judge Buck—I don't want a trial—he ain't dead—go ahead, what do I care—you are framing on me, and you know it"; or he might utter an oath or damn a witness. In conversation, very seldom was an answer other than logical and relevant. Sometimes there was a delay of as much as 30 to 45 seconds, but the answer would be quite to the point. Even at the height of his disturbance, it was possible to get from him statements which related to the killing of the officer, his guilt, his status, his mental condition, and his fate. All these data were in harmony with the facts of the case.

Sloper had been drawing pictures of hanging men, and of daggers and guns on the walls of his cell. He drew one such picture for me, that of a man being hanged, with rope in place, knot at side of neck, the subject with staring eyes and with tongue hanging out, and below, the word "Woodhall," the chief jailer. Asked to sign his name, he wrote quickly "B. S.," and turning gave a wise look, a slight laugh, and a full-face smile.

It is not possible at this time to go into detail concerning each of the factors developed in this case, but I would state that the most frank disturbances have been mentioned and that no symptoms which I interpreted as psychotic were found. Sloper had no phobias nor delusions; no more than the slight suspicion of pseudo-hallucinatory experiences. He had no mental disturbance out of keeping with external facts; no psychotic syndrome which would progressively tend to his own destruction mentally or physically or both, rather than the ultimate harm of the social group. His mental mechanisms of normal and abnormal sort were being set in motion,

always by mental experiences which had actual and real counterparts in his environment. His situation was a definite one; he was facing execution. His faking and the neurosis were his and nature's efforts, respectively, to remove him from this most distressing situation, and the tendency was that he would be helped at the expense of others and society.

## THE THERAPEUTICS OF SYPHILIS

By HOWARD MORROW \*

*Mercury given hypodermically after a course of arsphenamine or neoarsphenamine should be the routine treatment. Sulpharsphenamine should be confined to congenital lues and to patients who cannot have arsphenamine or neoarsphenamine given them. The bismuth preparations should be confined to late lues, especially those who have Wassermann-fast reactions, after courses of mercury and the arsenicals.*

DISCUSSION by Harry E. Alderson, San Francisco; Albert M. Meads, Oakland; Samuel Ayres, Jr., Los Angeles; Le Roy H. Briggs, San Francisco.

IN 1905, just twenty years ago, Schaudinn and Hoffman reported the etiological factor of lues. In 1906 the complement fixation test for lues was reported by Wassermann. The technique was simplified by Noguchi a few years later. Noguchi also reported on the cultivation of the organism in 1911. In 1910 Ehrlich published the supposed cure for lues by salvarsan. These reports represent only a few of the experiments that have been carried on during the past two decades in regard to the etiology, the cure, and the prevention of syphilis.

Before the introduction of the modern arsenical preparations, syphilis was treated by means of mercurial injections, mercurial rubs, and mercury and iodide of potash given by mouth. Patients who were fortunate enough to have mercury given them hypodermically over a long period of time or who were given mercurial rubs by a proper method had a chance of being cured; but the unfortunate patients who were given mercury and iodide of potash by mouth were seldom cured. Most of the so-called cures were instances of temporary arrest of the infection, which condition has been demonstrated by spinal fluid examination and by the blood Wassermann. Mercury given by mouth and iodide of potash still have their places in the treatment of syphilis, but they should not be given with the expectation of a cure.

**Mercury**—The best methods for the administration of mercury are by intramuscular injection or by inunction. We prefer mercury salicylate for intramuscular use, and find that it is possible to give it as a routine without much pain. Mercury is probably as important as the arsenic products in the treatment of syphilis. It finishes up the work that arsphenamine has started. Every course of arsphenamine treatment should be followed by mercury therapy, and it should be given over a period of time about three times as long as that allowed

\* Howard Morrow (809 Fitzhugh Building, 384 Post Street, San Francisco). M. D. University of California. Practice limited to Dermatology. Hospital connections: University of California, Southern Pacific, St. Luke's, St. Mary's, and other hospitals. Appointments: Clinical Professor of Dermatology, University of California. Publications: Numerous in current medical magazines.

for arsphenamine. Some physicians prefer the use of grey oil, and a few clinicians advocate the use of the soluble salts of mercury. Mercurial rubs or mercury given hypodermically are almost universally used in conjunction with the modern preparations of arsenic.

*Iodide of Potash*—In the early stages of syphilis potassium iodide is of little use. In late syphilis it is often of great value. It has no effect on the *treponema pallida*, but it removes the tissue reaction around them and thus permits the arsenic and mercury to destroy them. It is of great value in cardiovascular and central nervous system syphilis. Recently sodium iodide has been given intravenously, and this procedure is quite popular in some clinics.

During the great war it was impossible to secure salvarsan and neosalvarsan in America, so we were obliged to use the French preparation, arsenobenzol. Later on the secrets of their manufacture were secured by various wholesale chemists, and at the present time we have American-made salvarsan and neosalvarsan under the trade-name of arsphenamine and neoarsphenamine. Many preparations of these are made and sold by wholesale druggists, but we have used only those put out by the Dermatological Research Laboratories of Philadelphia and by the Metz Laboratories of New York.

*Arsphenamine* and *Neoarsphenamine* have their respective advocates. In private practice, and with our experiences at the University of California Medical School, these two drugs have proved of equal therapeutic value. Patients have improved clinically, and the serology has changed about equally with the two drugs. It has been our experience that jaundice is more likely to occur following the administration of neoarsphenamine than after the use of arsphenamine. Two patients who had received courses of arsphenamine, two years later developed typical primaries with motile spirocheta *pallida*. In the University of California luetic clinic, between January 1, 1925, and May 1, 1925, 326 arsphenamine and 215 neoarsphenamine injections were given. The conditions under which neoarsphenamine have been used are:

1. When the veins of the patient were small or thrombosed, and a smaller amount of fluid could be injected more easily than a large quantity of fluid.
2. Whenever a patient with primary syphilis reported for his initial treatment it was found more practical to give neoarsphenamine immediately.
3. When patients arrived at the clinic after the hours when arsphenamine was given.

*Sulpharsphenamine*—The great advantage of this preparation is that the injection can be given in a concentrated aqueous solution subcutaneously and intramuscularly. That sulpharsphenamine is curative for lues has been frequently demonstrated, but it is generally believed that it is inferior to arsphenamine and neoarsphenamine. As intravenous injections of sulpharsphenamine seem to cause more reactions than the intramuscular, this preparation should be confined to intramuscular and subcutaneous injections. It is of great value in congeni-

tal lues and in adults where intravenous injections of arsphenamine and neoarsphenamine cannot be given. Some investigators claim that this preparation has a superior penetrative power and is of greater advantage in cerebrospinal syphilis or neurosyphilis in general. A course of sulpharsphenamine consists of ten weekly intramuscular injections of 0.6 gram each. There seems to be more danger of producing an exfoliative dermatitis with sulpharsphenamine than with arsphenamine or neoarsphenamine.

*Silversalvarsan* was introduced into the United States from Germany three years ago. It is objectionable because of the staining, and as it seems to have no advantage over arsphenamine its use in this country is being discontinued. At the University of California Hospital we used over one hundred tubes, but have not used it for over two years.

*Tryparsamide*—In 1922 this drug was released for clinical studies. It was recommended for neurosyphilis and received favorable reports, especially in cases of general paralysis of the insane. In 1923 the drug was sent to various clinics for study. Of 695 cases reported in the literature, 463 showed definite improvement. Many of these cases were general paralysis of the insane, and a large number were able to return to work with mental restoration. In many cases the blood Wassermann became negative. The general opinion is that the gold chloride curve and the serology in general are not remarkably changed by tryparsamide. The use of tryparsamide began in November, 1924, at the University of California luetic clinic. Eight cases were treated, four of which were tabes, two general paralysis of the insane, and two central nervous system syphilis. It is too soon to report on these cases. From the literature there seems to be no doubt that tryparsamide has a definite tonic effect, and that it is a valuable drug in the treatment of neurosyphilis, but should be combined with arsphenamine and mercury.

*Bismuth* preparations are a new weapon in the treatment of syphilis. These preparations are of great value in late lues. They clear up luetic manifestations quicker than mercury, but more slowly than the arsenicals. Bismuth compounds should not be used to abort lues. In secondary lues the bismuth preparations are inferior to arsphenamines, both in clearing up the eruption and in changing the Wassermann reactions. In tertiary syphilis the clinical manifestations disappear rapidly and the serum reactions change more readily than in secondary syphilis. The greatest value of the bismuth preparations seems to be in cases where mercury and arsphenamine have failed. Reactions after bismuth injections are milder than those after mercury and arsphenamine. The usual course of bismuth therapy consists of ten weekly intramuscular injections. Our experiences with bismuth have been with the preparations put out by the Dermatological Research Laboratories and Metz Laboratories.

A definite routine in the treatment of syphilis cannot be advantageously followed. However, there are certain limitations of treatment that can be formulated. At the University of California Medical



School we give our patients with primary syphilis three intravenous arsphenamines (0.6 gm.) at three-day intervals, three at five-day intervals, and two at weekly intervals—eight in all. This is followed by eighteen weekly intragluteal injections of mercury salicylate (1-2 grs.). After a rest period of one to three months the patient is given another course of six weekly arsphenamine (0.6 gm.) injections and eighteen mercury salicylates. If the Wassermann reaction has been negative throughout and the spinal fluid is negative one to three months after the last treatment, all specific therapy is discontinued. The patient is kept under observation for a period of two years, and if he remains clinically and serologically well he is discharged as probably cured.

In secondary syphilis we aim to give courses of treatment consisting of six weekly arsphenamines (0.6 gm.) and eighteen weekly mercury salicylate injections. We always give at least one such course of treatment after the patient is clinically and serologically well.

In tertiary or late syphilis the treatment must be regulated according to the tissues that are involved. In cardiac or central nervous system syphilis we aim to give from one to six months of mercury and iodide before any arsenicals are used. Tertiary syphilis without any demonstrable central nervous system or cardiac lesions is treated in the same way as secondary syphilis.

In patients who continue to show a positive Wassermann reaction after three or four courses of arsphenamine and mercury therapy we resort to bismuth or sulpharsphenamine. We have had several such cases become serologically negative after the use of one or the other of these two products over a short period of time.

This procedure as outlined is a conservative one, and in the main is that advocated by Fordyce of New York. Pollitzer of New York was the first in this country to advocate the so-called intensive treatment of syphilis. He gives three injections of arsphenamine (0.6 to 0.9 gm.) at twenty-four-hour intervals. Arsenic is eliminated from the body in about twelve hours. By this intensive method the tissues are bathed in a fairly high concentration of the drug for about three days, and it more nearly approaches the sterilization anticipated by Ehrlich than in any other method. Of course, it should only be used in very early syphilis, with the object of aborting the infection. (Pollitzer, however, uses this method in practically all types of syphilis.)

#### DISCUSSION

HARRY E. ALDERSON, M.D. (490 Post Street, San Francisco)—In discussing this paper I wish to emphasize the fact that salvarsan treatment of lues has only been practiced for fifteen years and it is yet too early to pass upon the permanency of many of the reported cures. The question of when a luetic may be dismissed is most difficult to decide. Blood Wassermanns, spinal fluid tests, cardiovascular and other examinations, evaluation of the sufficiency of the courses given, all require most careful consideration. It is not an uncommon experience to have the various laboratory tests give negative results and the patient later on show positive serological or clinical evidence of the persistence of syphilis. Time alone will tell. We are now seeing many luetics who years ago were

dismissed as cured after one or two salvarsan injections or long courses of mercury and iodides by mouth only, and at that time negative Wassermanns. At the skin and syphilis clinic of the Stanford University Medical School we treat over two hundred syphilitics weekly. We maintain special day and night clinics for this purpose. For the period between January 1, 1925, and July 29, 1925, we have given 3313 injections of neoarsphenamine and 1318 injections of bismuth.

As for the different drugs now used in lues therapy, we find that in usefulness they rank as follows: arsphenamine, bismuth, mercury, and iodine. Most of our patients are ambulatory, and they receive neoarsphenamine. When it is possible to place a patient in bed we prefer arsphenamine. This we do with all our pregnant syphilitics with very satisfactory results.

Bismuth injections are given as part of our treatment both in early and in late lues, many of the latter with persistent Wassermanns responding satisfactorily. I feel that bismuth is superior to mercury as an anti-syphilitic remedy. We have given over three thousand injections of this drug.

For many years we have been having our patients use mercury inunctions. Where carried out intelligently and faithfully they are very efficacious. However, many patients cannot be depended upon to do this, so we often resort to mercury injections. At present we are using principally bichloridol and mercury salicylate.

As for the iodides, we never administer them in early lues. After the first year of the disease or in "precocious lues" we give the drug as it has always been given—in ascending drop doses. In addition to giving these four drugs, we endeavor to put our patients in as good condition as possible by means of physiotherapy exercise and proper hygiene.

In private as well as clinic practice we find that we cannot standardize our lues therapy, because there are so many variable conditions and factors. Our treatment is individualized. At present we endeavor to keep our *early cases* under constant treatment for the first year, *allowing no rest periods*, excepting where organic conditions call for them. Moore's report on 1500 cases of lues seemed to show that relapses were in direct proportion to the amount of rest from treatment given. Judiciously applied, intensive therapy should be carried out during the first year of the disease. Naturally, we frequently check up on our patients clinically and serologically, and make sure that therapy is doing no harm. Unless we find some special contra-indications, we give continuous courses of treatment as follows: First, arsphenamine, then bismuth or mercury, then arsphenamine followed by bismuth or mercury, and so on. On account of the tendency that both mercury and bismuth have to produce gingivitis, we do not give these drugs together or consecutively. We always have a course of neoarsphenamine in between. After the first year, of course, our treatment is not so intensive unless active complications develop. On account of lack of space I have omitted discussing in detail the different preparations mentioned by the authors, but I agree in the main with their observations.

ALBERT MEADS, M.D. (1706 Broadway, Oakland, California)—Regardless of whether or not one feels that it is for the best interests of the patient, the fact remains that the majority of people infected with syphilis are being treated by general practitioners. This is because most of the public have never heard of a syphilographer, because the modern medical man knows something about the diagnosis and treatment of syphilis, because of the great assistance of the Wassermann test in diagnosing some cases, and because most medical men now have mastered the technique of intravenous and intramuscular medication. Therefore, because syphilis is being so generally treated, a paper such as Morrow's should be instructive to all who attempt any treatment whatsoever. The facts brought out concerning the standard drugs, backed up by a large clinical experience, will prove extremely valuable, and allow those of less experience to adopt a routine method of treatment which can be intelligently followed out. The value of mercury properly used, the treatment of the so-called "Wassermann-fast" cases, the placing of bismuth therapy where it belongs, and the comparison of the better known arsenicals, all

have been touched upon. After reading this paper one will feel that he has been brought up to date—as far as the therapeutics of syphilis is concerned—and can safely proceed with the recommendations coming from such a source.

SAMUEL AYRES, JR., M. D. (Westlake Professional Building, Los Angeles)—I should like to add a word or two on measures to prevent untoward effects of the drugs described by Morrow. While it is true that the average individual can take the drugs and the doses outlined, certain patients suffer serious consequences even when the drugs are properly prepared and administered. Nothing can be done to avoid entirely the occasional case of drug idiosyncrasy except to give a small initial dose. Before each administration of any arsenical preparation it should be ascertained if any itching or eruption followed the previous treatment, and if so the dose should be reduced and the interval lengthened. A routine phenolphthalein test by revealing a subnormal kidney function should serve as a warning to use great care in the administration of mercury or bismuth. The urine should be examined for albumen at least every two or three weeks. I have seen two fatalities from failing to observe these precautions and one near fatality in a patient who showed a moderately low 'phthalein output. Preliminary routine urinalysis is not enough. The kidneys may have been severely damaged at some time, with subsequent replacement of kidney tissue, by scar tissue or hydronephrotic sac and a cessation of the urinary evidences of inflammation. It would be better to allow such a patient to live five or ten years longer and die of syphilis rather than kill him with mercury. Because of occasional injury to the optic nerve, a careful ophthalmoscopic examination should always precede the administration of trypanamide, and should be repeated if any suggestion of impaired vision occurs during treatment. These precautions may seem self-evident, but when large numbers of patients are being treated, especially in clinics, it is easy to become hurried and careless. The old admonition that if you cannot do your patient any good, at least do him no harm deserves to be called to mind occasionally.

LE ROY H. BRIGGS, M. D. (384 Post Street, San Francisco)—I was very glad to have Doctor Morrow speak such good words for mercury. In the treatment of late visceral and nerve syphilis, I have found it invaluable and of equal worth to salvarsan. In my hospital service, as well as with the more intelligent class of private patients, inunctions are used exclusively. In the one case the patients are rubbed, or rub, under the eye of an attendant, and in the other the patient is made to understand and practice the proper *modus operandi*. Such individuals must be kept under observation, especially as to gums, intestinal tract, and kidneys. The presence of microscopic blood in the urinary sediment is the earliest indication of renal irritation, and should be looked for at least every other week. Barring a severe nephritis, I know of no contra-indication to mercury.

Salvarsan is used equally vigorously in conjunction with mercury, but has more contra-indications. Liver disease, whether syphilitic or non-syphilitic, precludes its use. In syphilis of the aorta or myocardium it must be used with the greatest caution, in small doses, and preferably preceded by a course of mercury. In certain rapidly progressing nerve lesions, again great caution must be observed. Since the use of sodium thiosulphate for salvarsan dermatitis, this complication has lost considerable of its menace.

Dr. George G. Eitel has given to the Medical School of the University of Minnesota the handsome sum of \$80,000. The gift is in the form of life insurance policies payable at his death, with ample funds provided by Doctor Eitel to pay the remaining premiums. In a letter to President Lotus D. Coffman of the university, the donor expresses the desire that his gift shall be "for the development of loan scholarships for the benefit of medical students." Thus an annual income of nearly \$5000, plus all loans returned by student borrowers, is provided for, which amount may tide not a few, but many, medical students over hard places in their medical school days.—Federation Bulletin.

## CARCINOMA OF THE COLON, NOT INCLUDING THE RECTUM

By SAMUEL ROBINSON \*

*Patients with sufficiently severe toxemia from complete cancerous obstruction of the bowel will die in spite of any operation, however well chosen or well executed.*

*Resection and anastomosis in a single operation done in the presence of obstruction is generally fatal.*

*Even in partial obstruction, resection and anastomosis generally fail unless the bowel has been cleared previously of its contents either by repeated irrigations when such are possible, or by a preliminary colostomy or ileostomy. Fecal retention after anastomosis is toxic; distention may cause necrosis about the suture.*

*Infection is the most common cause of death following resection of tumors of the colon.*

*Anastomoses are apt to leak, causing general or local peritonitis if the suture is imperfect; if the blood supply to the anastomosing ends is a poor one, or if it is cut off during the operation. In many patients leakage resulting from the pressure of distention proximal to the suture line causes deaths which might have been obviated by a post-operative ileostomy.*

*Masses of inflammatory glands may be excluded from the portion resected, but malignant glands if not removed generally hasten the disease to an early termination. Resections not designed to include most of the involved glands rarely cure, hence the large number of fatalities within the first two years.*

*Neglect of preoperative preparation; a choice of operation inconsistent with the patient's condition; lack of provision to avoid post-operative distention; disregard of blood supply during anastomosis; and poorly executed intestinal suturing are errors which lead to disaster.*

DISCUSSION by L. W. Hotchkiss, Santa Barbara; Andrew Stewart Lobingier, Los Angeles; Emmet Rixford, San Francisco.

WE RECOGNIZE a great national endeavor to teach the nonmedical citizen symptoms of cancer. The surgeon meanwhile beseeches the physician promptly to recognize cancer when it is there. The physician continues to bemoan the lack of surgical skill to which his patient is ultimately subjected. These factors explain to a degree the high mortality in malignant disease of the colon, which are augmented by late consultation by the patient, misinterpretation of symptoms by the diagnostician, illy developed, illy chosen, or poorly executed surgical technique. Intestinal cancer is generally accessible, circumscribed, slow-growing, not prone to metastasize, and therefore removable. It may be said that the patient, the physician, and the surgeon are more responsible for fatalities than is the cancer itself.

To encourage the layman to earlier consultation by familiarizing him with the symptoms of this particular type of cancer is difficult. Gastric indigestion, constipation or diarrhea, mucus or blood in the stools, loss of weight, anemia, backache, rumbling bowels—these symptoms when occurring in certain combinations suggest the onset of intestinal cancer; and yet most of them are expressions also of many minor functional disorders of too common occurrence to cause the patient alarm.

If we would seek the earlier diagnosis of cancer of the colon through education of the public, I contend that we may better do so by instructing the

\* Samuel Robinson (22 West Micheltorena Street, Santa Barbara). M. D., Harvard, 1902. Hospital connections: Santa Barbara Cottage Hospital. Practice limited to Surgery.



layman in all ailments to consult the reputable physician rather than the cultist, the diagnostician rather than the therapist.

By far more important is it that we make the diagnosis when the patient arrives. This is extremely difficult in the first stages. No early symptoms are pathognomonic. All are easily attributable to functional ailments and benign lesions. I cannot imagine a distinctly early diagnosis being made other than by holding constantly in mind the possibility of bowel cancer in studying any malady associated with the gastro-intestinal tract. Given a thorough realization of the insidious nature of the first symptoms—a knowledge of those combinations of symptoms which should arouse suspicion—an untiring effort to follow up the case to verify suspicions, these alone will lead one to the early diagnosis of malignant disease of the colon.

May I group together certain hypothetical combinations of symptoms which I believe should arouse suspicion? A patient complains of vague gastric disturbance, soreness and a feeling of weight in the epigastrium, and loss of appetite. He is thinner than usual. He has seen blood mixed in the stools several times. Another patient, after years of regular bowel movements, has been constipated for several months. Occasionally he has pain in various parts of the abdomen. When at stool there is a sense of incomplete emptying of the bowel. Another patient has attacks of diarrhea. He is pale without having passed any blood. He has discomfort in the region of the cecum. A few years ago somebody removed his appendix. A fourth patient has been always constipated. A dose of salts has produced a single morning movement. Of late the same laxative has resulted in several movements. He complains of pain around his left hip, sometimes radiating down the sciatic. He does not look well.

These are the patients that pass us frequently. They are the ones who should arouse our suspicion. The sigmoidoscope, the barium enema, a scrupulous palpation of the abdomen, a stool examination, may disclose the seat of trouble; if not, observation should continue at intervals.

Forty per cent of all cases of cancer of the colon are said to continue with such indefinite symptoms as these without the development of the telltale symptoms of obstruction. Sixty per cent go from the insidious symptoms to those of chronic obstruction. And of these some 20 per cent go further to acute complete obstruction. Realizing then that the diagnosis in the nonobstruction group is rarely made, and that the chronic obstruction group is rarely diagnosed until the tumor is large enough to partially obstruct, and that most of the group destined to acute obstruction are diagnosed only at that stage, it is little wonder that the mortality is high.

The telltale symptoms of chronic obstruction are almost pathognomonic. In some place in the abdomen—and repeatedly the same place—pain will come moderate at first, but, like a labor pain, gradually developing its maximum. Then there is a rumbling, audible some distance away. The pain lessens immediately, then disappears, only to recur in the same cycle after the lapse of varying intervals. There may

be a visible area of distention at the site of pain which likewise disappears at the end of the wave.

In the comparatively small group of patients who develop complete obstruction—the ones we most often see—the diagnosis is not difficult. Suffice it to say that the abdomen is generally not of a type suggesting an emergency in the accepted sense. Nausea and vomiting are sometimes absent. Distention is often delayed. Evidences of toxemia are less pronounced than in the other types of obstruction in which strangulation results in necrosis of the intestinal mucosa.

The pathology of cancer of the colon explains somewhat the diversity of symptoms; it also influences materially the selection of operative technique.

Most colon tumors are adenocarcinoma. The scirrhus type, the annular or ring carcinoma—a fibrous growth—more often invades the left colon, particularly the sigmoid. The tumor mass is generally small and not easily palpable. It is obstructive, producing the telltale symptoms. The fungating encephaloid carcinoma is an overgrowth of epithelium growing into the bowel lumen as a large palpable tumor. It more commonly occurs in the right colon, and is less likely to obstruct. The sigmoid and cecum, the most movable parts of the colon are the sites of more than half of all tumors, the sigmoid occurrence predominating. There is evidence that the portions of the bowel most subject to fecal trauma are more prone to invasion. Benign ulcers and diverticulae are rarely the origin of colon tumors. Cancer of the colon rarely occurs after the age of 70 or before 50.

With what, then, is the surgeon confronted? The person presenting may be in excellent condition, thanks to the early recognition of a beginning growth by some alert diagnostician. More often it is an individual middle-aged or elderly person in an emergency state of complete obstruction, or it is a person dragged down by months of chronic obstruction, emaciated, dehydrated, usually anemic or cachectic, toxic, and long suffering. Blood chemistry findings are bad. The  $\text{CO}_2$  combining power may be below 45. Urea and creatinin may be high. The colon may be under tension and filled with accumulated feces from which absorption is going on, the bacterial flora being the more virulent because of prolonged obstruction. There may be evidences of local peritonitis around the pelvic colon or about the left diaphragm, with a consequent added toxemia.

In the acutely obstructed cases there is no time for preparation other than the administration of saline, or transfusion in the hemorrhage cases. Hence, the lamentable fact that the mortality in these cases after simple colostomy or ileostomy with or without exploration is as high as it is in the radical resections done prior to obstruction.

In chronic incomplete obstruction the individual's resistance may be developed. A gradual administration of alkalis improves the blood chemistry. Food with small residue, high in carbohydrates with some protein and no fats is given. Fluids by mouth and irrigation are brought up to 2500 cc. daily. Mild catharsis and a colon irrigation loosen and remove scybala. A partially obstructed bowel may some-

times be cleared of its contents by thorough rectal irrigation even before a preliminary operation. The surgery of cancer of the colon is advancing; the results are nevertheless deplorable. The locating of the tumor, the type of the tumor, and the status of the patient are the prime factors for consideration in choosing the surgical program. A tumor of the cecum may be a large nonobstructing, movable one, with or without extensive glandular involvement; while one of the lower sigmoid may be small, hard, obstructing, difficult of delivery, adherent to neighboring viscera, and scattered into masses of glands. The patient with the growth in the right colon may be free from the toxemia of obstruction and of cachexia, while the one with the sigmoid malignant may be toxic, both from the absorption from fecal retention and from the malignancy itself. A growth in the splenic flexure may have leaked into the upper quadrant of the peritoneum, the tumor may be of the most malignant type, there may be obstruction and fecal impaction, and the patient may present the serious symptoms of three types of toxemia: infection, intestinal, and malignant. Such are the various combinations against which the method of surgical procedure must be wisely chosen.

There are records of complete resection with anastomosis in one operation performed in the presence of complete obstruction, with recovery lasting even more than fifteen years. There are also records of deaths immediately following a preliminary cecostomy or colostomy, all of which proves the significance of the degree of toxicity present at the time of operation.

The general policy of performing some drainage operation as a preliminary to resection of the tumor is quite universally accepted. The cecostomy is popular because it is serviceable regardless of the location of the growth, and because in left-sided resections the operative field is farther away from the contaminating artificial anus over the cecum. In cecal tumors the preliminary must be an ileostomy. In sigmoid tumors, of course, many prefer a colostomy. It is too commonly argued that a preliminary drainage is only indicated in the presence of complete obstruction; that in nonobstructing tumors resection may be the one and only stage. Even where partial obstruction exists, an opening in the bowel proximal to the tumor provides not only a means of irrigation, but also an added insurance against post-operative distention and pressure on the anastomotic suture line. The avoidance of distention proximal to the anastomosing suture is regarded as of such importance that many insert a catheter in the small bowel even subsequent to a resection. The clamp is often never removed from the catheter, and the latter is expelled eventually by the spontaneous closure of the ileostomy. But its presence as a safety valve is an added security.

In a patient with partial obstruction or with obstruction of short duration without marked toxemia, if exploration reveals a movable, small tumor without extensive gland involvement, it is often tempting to combine drainage and resection in one sitting, leaving the anastomosis for a later stage. The double-barrelled operation is then suitable, in which

the tumor is resected between clamps placed either side and well clear of the tumor. The sides of the ends are then approximated with sutures, the two ends brought through the wound, a glass tube being inserted into each. Immediate drainage and relief of obstruction, with removal of the growth and the glands of the immediate mesentery, are provided in such an operation. Probably this type of quick excision between clamps will ultimately replace the present rather popular Miculicz three-stage operation. There are two distinct objections to the Miculicz technique. The mesentery is not removed, and any malignant glands beyond the bowel wall are left. Furthermore, although the tumor may be freed and delivered sufficiently, apparently to allow a cautery division at least two inches distal and proximal to the growth, when the time for the cautery removal arrives the bowel has retracted and the cautery division occurs too close to the tumor; too close as proved by a recurrence of carcinoma in the wound in 7 per cent of the Mayo clinic cases so handled.

If the progress of the disease is not too advanced, as evidenced by cachexia and loss of weight, and exploration discloses a limited process, in other words if a complete cure is a reasonable possibility, a preliminary drainage cecostomy or colostomy to be followed later by an open, radical, clean resection with end-to-end anastomosis, is a procedure undoubtedly superior to the Miculicz type of operation.

In those rare early, unobstructed, limited, cases in which a resection can be done at the first and only stage, and in the cases that have been saved by a preliminary drainage and have been built up for a second-stage resection, the choice of type of resection of the colon is not difficult. An end-to-end technique has quite universally replaced an end-to-side and side-to-side one when the mobility of the ends renders an end-to-end anastomosis possible. If, as in resections of the cecum or splenic flexure, one of the ends has a free mesentery and the other is fixed posteriorly, either an end-to-side or side-to-side union must be effected, or, better still, the bowel must be moved beyond the tumor until free mesentery is reached, then an end-to-end technique is possible. Illustrations of this are in resections of the cecum, wherein the bowel is removed up to the free transverse colon to which ileum may be anastomosed end to end, and in the splenic flexure resections when the descending colon also may be removed and the transverse colon anastomosed end to end with the sigmoid.

From experience with my own group of ten cases, brief reports of which are appended, and from the careful study of the reports from many clinics of the results in operations for cancer of the colon, justifies my conclusions published at the head of this discourse.

#### CASE REPORTS OF CANCER OF THE COLON

1. C. D., a woman, aged 62. "Colitis" for six years. Five weeks ago acute attack of "colitis." Temperature, 101.6. After a barium enema the day of operation, x-ray showed almost complete atresia at junction of descending colon and sigmoid. At time of surgical consultation two hours before operation, there was vomiting and distention. Temperature, 100; pulse, 120. Operation, November 13, 1920. Scirrhus carcinoma of lower sigmoid pal-



pated. Operation: colostomy in sigmoid. Up and about for ten months. Resection not attempted, because of chronic local retroperitoneal infection. Death in sixteen months. Metastasis in liver. No autopsy.

2. E. S., a woman, aged 52. Nausea and vomiting, and constipation for three months. Loss of weight. Mass palpated in lower epigastrium (fecal impaction). X-ray showed filling defect in stomach. Later (day before operation) obstruction of barium at splenic flexure. Pulse and temperature normal; no distention for seven days prior to operation. Day before operation, rise of pulse and beginning distention. Operation, August 24, 1920. Tumor palpated two inches below splenic flexure. First-stage Miculicz operation; catheter placed in colon proximal to tumor. Catheter removed and bowel opened proximal to tumor in twenty-four hours. No relief of obstruction. Ileus. Death on third day. Autopsy: scirrhous adenocarcinoma below splenic flexure; general peritonitis; cecum, ascending, and transverse colon enormously distended with doughy fecal impaction.

3. Van B. S., man, aged 81. Arrived in hospital with marked distention and vomiting. Temperature, 99; pulse, 100. Cathartics and enemas had been given for three days without results. Operation: local anesthesia; median incision; tumor not palpated. Colostomy made in distended transverse colon; third day colostomy draining freely; no distention. Death on the eighth day. Autopsy: Carcinoma of lower sigmoid, involving loop of small bowel, presacral region, and left bladder wall.

4. W. R. H., man, aged 59. Admitted to hospital with distention and obstruction. Twelve months previous had distention and abdominal pain, which was relieved. Nine days ago present attack began. Paroxysmal pain in abdomen; increasing distention. No bowel movements. Some evacuation of gas. Operation: local anesthesia; no exploration; colostomy; tube sutured into proximal portion of sigmoid. Draining well on second day. Death on the fourth day. Partial autopsy: annular carcinoma of recto-sigmoid; metastasis in liver.

5. L. K., woman, aged 50. Illness of six weeks; severe stomach distress, belching of gas. Treated by physician, without diagnosis. Mass felt by patient in left lower quadrant. At time of surgical consultation, obstruction almost complete. Telltale symptoms severe. Local distention; mass palpated. Immediate operation, March 12, 1924. Tumor of lower sigmoid delivered. Tumor removed between clamps. Enlarged malignant glands palpated along iliac vessels. Distal end closed. Proximal end brought into wound as colostomy. In two months nodules palpated in liver. In ten months jaundice developed. Death one year after operation. Autopsy: extensive adenocarcinoma, involving retroperitoneal glands and liver; ascites.

6. B. W., woman, aged 39. Eight months ago, diarrhea. Stools said to contain parasites; disappeared under treatment, but diarrhea continued. Blood and mucus in stools for three months. Chiropractic treatment for past few months. Increasing bladder symptoms; pus in urine. Surgical consultation: pelvic examination reveals a mass in left, adherent to uterus and bladder. No symptoms of obstruction. Operation, May 29, 1924. Large malignant mass adherent in pelvis, involving bladder and a loop of small intestines. Section of small bowel removed with end-to-end suture. Sigmoid tumor excised between clamps. Distal end closed. Proximal brought into wound as colostomy. Death in twenty-four hours. Tumor specimen from sigmoid; adenocarcinoma; cauliflower projections into lumen without obstruction.

7. L. B., woman, aged 75. Entered hospital with fracture of neck of left femur and of radius, following a fall. After observation for three weeks, plaster cast applied. In history taken at admission and during period in hospital, intestinal symptoms absent. Some mental disturbance. Death without apparent cause, after gradual decline. Autopsy revealed a large nonobstructing adenocarcinoma of the splenic flexure, with some glandular extension and no metastases.

8. M. D., woman, aged 70. Gastro-intestinal disturbances for several years. Six months ago abdominal pain, nausea, and constipation. Three months ago a similar attack. Two weeks ago a third attack. Twenty pounds

weight loss in past year. At hospital admission barium enema met complete obstruction at upper sigmoid. Distention very slight. Pulse 80; temperature normal. A small mass is palpable in left lower quadrant. There is occasional vomiting. Spasmodic pain occurs in region of mass. Operation, July 2, 1924. Annular carcinoma of sigmoid. First and second stage Miculicz. Bowel had retracted at time of cautery amputation, so that division was near tumor; and at the mesenteric border, tumor tissue was entered by cautery. Today, ten months after operation, there is liver involvement. There is recurrence of carcinoma in upper end of wound. X-ray shows metastasis in lungs. Death inevitable within two months.

9. F. T., man, aged 74. Cancer of recto-sigmoid, diagnosed one year ago. Operation refused. Now enters hospital with complete obstruction. Moderate distention; vomiting; leucocytosis; abdominal pain. Immediate operation. Local anesthesia. Free fibrinous fluid in abdomen. Mass felt continuous with rectal growth, extending into sigmoid. General peritonitis. Colostomy. Death in thirty-six hours. Autopsy: fibrinous peritonitis. Small abscess in recto-sigmoid region adjacent to a tumor mass. Adenocarcinoma.

10. P. E. B., woman, aged 66. Constipation for three years. For four months there has been spasmodic pain in the left lower quadrant, extending into the hip. Morphine habit pronounced. Marked anemia. Great emaciation. A mass is palpable in the left lower quadrant. Patient brought to hospital for colostomy to prevent complete obstruction and to reduce pain. Operation. Local anesthesia. Mass in lower sigmoid. Colostomy. Patient alive, with great reduction of pain. Prognosis: fatal.

#### DISCUSSION

L. W. HOTCHKISS, M. D. (22 West Micheltorena Street, Santa Barbara, California)—Dr. Robinson has presented so well the subject of surgery of carcinoma of the colon that there is very little to add. I should like to emphasize again a point which has already been made, that resection and anastomosis should never be done in the presence of an obstruction. I have found that an operation in two or three stages under these conditions is the operation of choice, namely, mobilization of the growth and its fixation in the wound, and its removal by cautery at this time, with drainage of the open ends by Paul's tubes held in place by suture so that no leakage occurs. This is frequently possible as a part of the primary operation. Later the establishment of continuity of the intestinal canal by means of clamps, and finally the closure of the fistula. I have not hesitated in cases of obstruction to open and drain the intestine at the time of the primary operation rather than wait for adhesions to form, when the excision may be more difficult, due to shrinkage and retraction of the intestine, making it sometimes far from a simple procedure. The peritoneal cavity can be fully protected by careful suture, and the wound above and below the colostomy be protected by vaseline gauze, under which frequently healing occurs without infection. Early relief of the obstruction is very important and easily obtained with as little degree of danger from infection as if the opening of the gut were delayed and an ileostomy or colostomy of the opposite side done.

The question of early diagnosis is always with us. It is rarely made, and if made through the means of the x-ray in the absence of symptoms, the operation may frequently be declined by the patient unless the indications are quite positive. Many of these patients have only a slight tendency to metastasize, and so offer reasonable hope even when there is wide involvement of the intestine and mesenteric glands are enlarged.

ANDREW STEWART LOBINGIER, M. D. (Merritt Building, Los Angeles)—Dr. Robinson's review of the surgical problems in cancer of the colon is thoughtful and timely. It seems necessary and expedient to emphasize over and over again in these discussions the importance of early diagnosis. Too often these patients are brought so late to the surgeon as to make impossible adequate surgical benefit.

We have been able to greatly lower our mortality by a free cecostomy or colostomy drainage done at once under local anesthesia and a careful preparation of the

patient for the later resection. This preparation may require two or three weeks. It is time and effort well spent to overcome the dehydration, toxemia and that concealed but insidious low resistance to the shock of operation characteristic of these patients.

When the patient is properly prepared for it, a deliberate resection with anastomosis and dissection of the involved mesenteric glands may be done with very slight unfavorable reaction. Even if metastases have occurred the re-establishment of the colonic current will be of infinite comfort to the patient until the end.

I have not favored the method of Von Mikulicz. At best it is a crude procedure, and is usually inadequate for the very reasons advanced by the author of this paper.

There is no emergency of obstruction which, if it cannot be relieved by free colonic drainage, would be relieved by any form of resection. To do a resection before the patient is built up by days of preparation after the obstruction is relieved, imposes a most ill-advised hazard.

We shall do well to cultivate a sound judgment here and remember we are dealing, as has been so well emphasized by Robinson, with an exhausted surgical risk.

EMMET RIXFORD, M. D. (1795 California Street, San Francisco)—If Dr. Robinson's ten cases of carcinoma of the colon with mortality and fatal prognosis of 100 per cent were the inspiration of his paper, they have contributed by their sacrifice not a little to a better understanding on the part of the medical profession (and let us hope of the laity also) of conditions which made carcinoma of the colon one of the surgically curable forms of cancer.

If cancer of the colon is curable, why is it not more often cured? It surely ought to be. While making no pretense to originality of fact or procedure, Robinson has answered clearly and fearlessly, putting the blame where it rightly belongs. He states in concise and readable form the principles on which this disease must be attacked and incisively shows the responsibility of the medical profession in teaching the laity, in making the diagnosis before it is too late, and in developing a technique by which the practical difficulties of the problem can be overcome.

It is significant that Robinson's ten patients were operated on too late for the most part because the diagnosis was not made in time and not as early as it could have been made.

The discourse is a timely one and should have wide circulation. However, the situation is not so bad, of course, as would be indicated by the results in this particular series of cases. Larger series show practical results to justify the statements in the paper that carcinoma of the colon can and ought to be cured.

My own series, while not large, contains forty-two cases, many of which exemplify and illustrate the errors and shortcomings set forth in the paper. In one patient my own failure to make the diagnosis was the cause of a delay of several months which may have permitted liver metastasis. In another the ring carcinoma was so thin as to escape detection, even in exploratory laparotomy in spite of diagnosis, and caused a delay of six months before operative removal, yet the patient survived and died of some intercurrent infection still free from recurrence. In a third, a year was lost after diagnosis because the patient thought she was doomed, having had the rectum removed for carcinoma fifteen years before, and submitted to operation only after obstruction came on. She died of recurrence two years later. In a fourth, the physician made the diagnosis of carcinoma of the cecum, but considered the patient inoperable. Laparotomy a year and a half later, after transfusion because of anemia (hemoglobin of 15 per cent), showed the carcinoma to be of the gelatinous form, which is much less malignant than the ordinary adenocarcinoma, but at the time of operation it had become adherent to the lateral parietes over a small area. The man is still alive after almost two years, though with recurrence. In a fifth case a Christian Science practitioner was directly responsible for the delay of many months, but, notwithstanding, the patient is now alive and well, ten years after removal of the carcinomatous cecum, in spite of a hemoglobin of only 25 per cent at the time of operation.

I am a little surprised to have Doctor Robinson state that carcinoma of the colon is rare before the age of 50. The notion which we have held for many years is that intestinal carcinoma is relatively more common in the young than is carcinoma of other organs. In my own series, ten, i. e. nearly 25 per cent, were under 50, one at 26, another at 29, this latter alive now and well six years after excision of the sigmoid.

While agreeing, of course, with the principles of treatment set forth in the paper, I feel that certain points should be specially emphasized. In general, obstruction must be relieved before the gut is resected. This may be done by cecostomy or ileostomy, according to the site of the tumor, or the Mikulicz technique may be employed. In other words, in obstruction a two-stage operation is mandatory. In the absence of obstruction it is not, and even presents some disadvantages.

The Mikulicz operation mentioned in the paper and designed to minimize the dangers due to obstruction and hypertrophy of the gut is not without danger on its own account. In one of my cases, a carcinoma of the upper portion of the sigmoid, the ideal case for the Mikulicz operation, the inferior mesenteric artery was cut at the time of removal of the tumor (third stage of the operation). This was followed by gangrene of the lower segment with resulting fatal peritonitis. In other words, this so-called "critical point" of the sigmoid should receive special attention, and if its nourishing artery has to be cut its whole loop supplied by that artery should be removed.

There seems to be some difference of opinion as to the relative advantages of circular and later anastomosis. My own results have been more satisfactory with lateral anastomosis of the colon or of the ileum and colon than end to end, although I lost one patient from perforation of a gangrenous patch on the efferent loop of the colon, due to interference with its circulation by the suturing in the lateral anastomosis. Perhaps the suture line approached too near the invaginated end of the gut, or perhaps an end-to-end anastomosis would here have been preferable.

Where the colon is adherent or where the intestinal or lateral or splenic reflection of the colon seems to fix the gut, the longitudinal muscles pulling from this fixed point are apt to cause the sutures to cut out. Especially is this a real danger when the muscle has been hypertrophied in case of partial obstruction.

Of my forty-two cases, thirty-nine were operated upon by me, and of these twelve were found clearly inoperable; twenty-seven promised enough to be subjected to excision, of which ten died of peritonitis, pneumonia, etc., following the operation, while six died later of recurrence or of intercurrent affections, two not traced, and nine are now alive and still free of recurrence, three at two years, two at seven and one each at four, six, ten, and twelve years. In studying the cases critically, the conclusion is inevitable that the number of cures would have been considerably larger had there been no errors in diagnosis or in technique.

In conclusion I would again emphasize the facts that carcinoma of the colon is of slow development, metastasizes slowly, is in a part of the body readily accessible, and that when the patients escape the primary mortality of operation they remain well in a larger percentage than in carcinoma of almost any other organ. In other words, cure by operative means of carcinoma of the colon is to a larger extent than the cure of carcinoma of other parts of the body, a matter of medical and surgical technique.

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Whatever we may be able to do in the future to make wealth serve the interests of the spiritual life, it must be confessed that the past does not encourage the hope that the finest virtues can be maintained except where there are large classes who are challenged to heroism by life's handicaps, but are not tempted to despair by insurmountable difficulties.—Reinhold Niebuhr, *The Atlantic Monthly*, June, 1926.

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The process of legislating humanity into progress without first convincing it has not proved to bring about either the immediate or the lasting benefits which the slower methods produce.—*World's Work*.



## CARDIAC DECOMPENSATION DURING PREGNANCY

By KARL L. SCHAUPP \*

(From the Department of Obstetrics and Gynecology,  
Stanford University Medical Department)

DISCUSSION by Caroline B. Palmer, San Francisco;  
H. A. Thompson, San Diego.

**I**N MAKING routine examinations of all pregnant patients, one finds rather a large number who show various types of heart lesions. Many of these patients have murmurs or have a pulse that varies from the normal in rate, rhythm, or quality. Through the years the idea has been handed down that heart disease, as such, is a serious complication of pregnancy. While this holds true with some patients, one is impressed by the greater number who, having had more or less serious decompensation at some period of their pregnancies, go through labor without any real cardiac disturbance.

Where cardiac disease exists the patient must be carefully watched for signs of decompensation, and if decompensation occurs treatment should be instituted at once. Under treatment most patients improve, but where they do not we have often the added complication of an operative termination of the pregnancy. Early in pregnancy it may be a curettage, later any one of a number of operations, but in any case an anesthetic may be an added burden.

While in the preparation of this paper case histories were studied from the standpoint of lesions and symptoms, the main purpose has been to give some idea of the kind of anesthetic used, the time of administration, and such other factors as might be of use to the section of anesthesiology. All of the histories where a diagnosis of cardiac decompensation during pregnancy had been made were studied, but only those where the decompensation influenced the manner or time of termination or where grave symptoms appeared are considered. About 75 per cent of these patients were delivered at or near term spontaneously, spontaneously after induction with bags, by forceps, by version, and by vaginal, classical or poro Caesarean section. The other 25 per cent had to be terminated at or before the third month, because of the failure of the heart to improve under treatment.

The type of lesion most common in the Stanford service during the last six years was mitral insufficiency, which made up about half the cases. Mitral stenosis with insufficiency and endocarditis made up about one-sixth each, while mitral stenosis, myocarditis, aortic stenosis, aortic insufficiency and aortic stenosis with insufficiency made up the balance. Myocarditis and endocarditis, while the least common, were the most serious. Mitral stenosis came next and always caused concern. Mitral insufficiency stood the strain of labor quite well and rarely caused trouble. The aortic lesions were not the

cause of very serious symptoms except in one patient who also had mitral and myocardial insufficiency.

The symptoms of cardiac failure in the pregnant woman are naturally the same as in the nonpregnant patient, except that the added burden of the pregnancy may hasten a break. The strain of nausea, vomiting, malnutrition, and the presence of fetal toxins, early in pregnancy; mechanical embarrassment to circulation by the growing uterus, the tortuosity of vessels and the elimination of wastes later cause a great burden to be thrown upon the heart. Many of the patients who pass midpregnancy can be carried to the time where the child is viable and improve as the pregnancy progresses. Here our problem becomes that of helping the patient through her parturition with the least possible strain upon the heart.

In another and slightly more common class of patients, decompensation occurs early and grows progressively worse; some even begin to show increasing signs of decompensation before they know that they are pregnant. In most such cases, if the patient comes under proper medical supervision, the symptoms can be controlled and after a more or less critical period pregnancy may continue uneventfully to term and end normally. We speak of the strain of labor upon the heart, and there can be no question that the work performed at this time is far greater than that for the same patient at any other time of her life, yet along with the greater demand nature has developed a greater reserve strength to draw upon, and so equalization is maintained. Our problem then becomes that of conserving strength and resistance.

In deciding upon the kind of anesthetic that is to be used and upon the method of its administration, the condition of the patient, as shown by signs and symptoms, must be taken into consideration. The commonest sign is the increase in the area of heart dullness to percussion, for practically all patients whose hearts are failing show this sign. This must, however, not be confused with the displacement of the heart, due to the upward pressure of the abdominal viscera. Murmurs may or may not be present, but are not in themselves a sign of decompensation.

Edema is common and is naturally important, but may be present because of some other reason such as nephritis, toxemia, or general embarrassment to the circulation of the lower extremities by increased intra-abdominal pressure.

Dyspnoea comes next in frequency, but here again too much stress must not be laid upon a symptom, because even with cardiac pathology present the cyanosis may be due to interference with the free respiratory function by upward pressure of the uterus on the diaphragm.

Pain when present is always serious. It is usually precordial and may radiate into the left shoulder and arm, but may even be present in both arms. Rarely is it present in the region of the liver.

Cough when present is the most serious symptom when it is of cardiac origin, and is often most obstinate. All of the patients who had this distressing symptom had severe decompensation.

\* Karl L. Schaupp (490 Post Street, San Francisco). M.D. Stanford University. Practice limited to Gynecology and Obstetrics. Hospital connections: Stanford, Lane, Franklin, San Francisco hospitals and San Francisco Polyclinic. Appointments: Assistant Clinical Professor, Stanford University.

Cyanosis is rarely present except in grave conditions, and when it does occur calls for the most careful consideration. Here the slightest effort may prove fatal, and any interference is almost out of the question until there is improvement.

Blood-pressure readings are as important as heart examinations because compensation never returns with a falling pressure. Even when the pressure is already high during a break, it rises still higher when the symptoms improve. To illustrate, one patient had a pressure of 218/144 at the time that she was under treatment, but when she had improved it rose to 230/148. In the weeks following, however, it fell considerably, but never approached normal because of other conditions present. In another serious case, where the habitual pressure was lower, it rose from 94/60 to 114/70 upon the return of compensation.

The amount of hemoglobin present is also important, for with the exception of two patients all those presenting a serious picture had readings below 73 per cent, and some of these were as low as 40 per cent. The anemia here naturally greatly reduces the oxygen-carrying capacity of the blood and makes greater heart effort necessary.

As the choice of anesthetic depended upon the foregoing symptoms, so the choice of procedure in each case depended upon the degree of decompensation, the parity of the patient, the position of the child, the condition of the cervix, the size of the pelvis, and upon the anesthetic that was possible to administer. The latter does not mean only the kind of anesthetic, but also the amount necessary in relation to oxygen needs and to the time element of the operation. Thus a patient who is cyanotic and orthopnoic can hardly be put flat upon an operating-table and delivered by manual dilatation or by abdominal Caesarean section; but vaginal section may be done with reasonable safety, under very light anesthesia. This is made possible because the patient can be placed upon the table with shoulders elevated and because a cutting operation on the cervix is less apt to stimulate the reflexes than the other operations do. In other patients the stimulation to the heart, as well as the relaxing effect of small amounts of ether added to the nitrous oxide and oxygen, may make abdominal section the operation of choice. This would hold true in such cases as are considered borderline, where there is disproportion between the child and the mother's pelvis, and where the labor or operation would be long if accomplished by way of the vaginal canal. In one patient of this group upon whom an abdominal Caesarean section was being done under nitrous oxide and oxygen, the pulse was sixty beats per minute; with the addition of a small quantity of ether the pulse rate rose to between 84 and 108, and the patient's condition improved.

In our series nitrous oxide and oxygen as the anesthetic of choice was favored most often, eleven times. Nitrous oxide and oxygen with ether in small quantities from time to time was used five times and ether was used four times. The length of administration varied from a few minutes to one hour and forty-three minutes. (This was a patient where

sterilization followed curettage.) The length of anesthetic becomes more important when we consider what the patient has been subjected to before the operation begins, thus the thirty to forty-five minutes necessary to do a Caesarean section under nitrous oxide and oxygen does not mean as much to the patient's condition as fifteen minutes of surgical anesthesia for a difficult Scanzoni forceps operation after twelve hours of wearing labor.

Considering the fact that any anesthetic in any case adds strain and carries with it a certain risk, we naturally must seek for that which upsets equilibrium the least. This does not mean only what chemical should be used or whether it be used alone or in conjunction with some other, but in what strength and to what degree of analgesia or anesthesia. The position of the patient upon the table, the length of administration and the individual characteristics of the patient, are all points which are often overlooked but which are all important, and can be best judged by those who administer anesthetics regularly. It is for this reason that I feel that the opinion of the anesthetist is of as much importance in determining the procedure to be followed as is that of the internist. In fact it is my practice to tell the anesthetist my problem and to allow him to choose the anesthetic and to consider his advice in the selection of the procedure. In the conduct of the operation good results depend upon absolute co-operation with the anesthetist. He watches the pulse, respiration, color, blood pressure, and general condition of the patient, and is keeping constantly in mind such pathological conditions as may be present and is considering the work that the operator is attempting to accomplish.

One patient of this group was in a very serious condition. Under medical treatment in the hospital she improved so slowly that it was considered unsafe to wait longer, and it was decided to terminate the pregnancy at once. She was a multipara almost at term and the cervix was dilated three centimeters, so manual dilatation of the cervix and extraction of the child was decided upon. A physician stood beside the patient throughout the operation and felt that the patient was standing the procedure well. The anesthetist, however, was having a most unhappy time and asked that all speed compatible with safety be made, for he felt that he had a small margin of safety. He was watching pulse, respiration, and color and knew that a slight variation from the proper proportion of gas and oxygen caused a decided variation in her condition. The fact that the pulse remained steady during most of the operation was a compliment to his art rather than an indication that the patient's heart was strong.

Of all the patients who early or late had operative termination of pregnancy because of cardiac disease, there was none where the anesthetic seemed to have done any harm or to have caused any great degree of embarrassment to the heart. This means, either that the importance of cardiac disease during pregnancy has been overestimated, than an anesthetic is safe in all cases, or that the anesthetist and anesthetist were carefully chosen. I feel that the last is the true explanation and should add that almost



any patient with decompensation can be given an anesthetic safely for an obstetrical operation when the anesthetist is a physician, trained to study and understand signs and symptoms as well as in the mechanics of his art.

#### DISCUSSION

CAROLINE B. PALMER, M. D. (2401 Sacramento Street, San Francisco)—Several points in this paper are of outstanding importance to all who have to do with the choice and administration of anesthetics.

Unquestionably, myocarditis and endocarditis are the most serious forms of cardiac disease in relation to the anesthetic used and the method of administration. In these conditions, as well as in decompensation from any cause, nitrous oxide with a large percentage of oxygen is satisfactory for *analgesia*, but any attempt to produce surgical anesthesia with this anesthetic entails an unjustifiable hazard. These patients cannot bear the limitation of oxygen necessary to induce surgical anesthesia with nitrous oxide and oxygen alone. A decrease of oxygen below 20 per cent is never safe in the class of cases under consideration and often much higher percentages are indicated, as cyanosis should not be permitted for an instant. When the necessity for surgical anesthesia arises, it is far safer to increase the percentage of oxygen and add as small an amount of ether as will produce the desired result.

The importance of doing everything possible to shorten the duration of anesthesia is always worthy of consideration, but in this class of cases it easily may be the determining factor.

It seems to me that the keynote of the paper is the recognition of the value of co-operation between the obstetrician or surgeon and the anesthetist. Without this co-operation the best results are not possible.

H. A. THOMPSON, M. D. (Electric Building, San Diego)—This paper presents a problem that is of great interest and importance to all anesthetists, that of cardiac decompensation.

Whatever the type of lesion present, we must realize we are dealing with an abnormal heart and it may respond in an abnormal manner to any anesthetic.

We have learned that some types of lesions, notably the aortic, are more prone to cause trouble than others, except possibly myocarditis and acute endocarditis.

This seems to be contrary to the author's cases, but has been my experience.

I have had less difficulty with mitral lesions than any other.

I believe the use of gas, owing to the lesser irritation and the ease with which it can be taken, offers many advantages. Here again I believe that ethylene, with the large percentage of oxygen which may be administered with it, up to 30 to 40 per cent, in some cases with a little ether vapor if that may be necessary for complete relaxation, offers the nearest to the ideal anesthetic.

The increased relaxation, over nitrous oxide, offers a marked advantage either for a Caesarean, a version, or a rapid forceps delivery, and the recovery may be brought about rapidly by an increase in oxygen in case of weakening of the heart muscle.

I believe an opiate in small amount aids in quieting the patient, and have not found it gave any untoward symptoms to the baby.

It is very essential to produce anesthesia in a manner free from any stage of excitement, and to maintain as light an anesthesia as may be permitted by the procedure decided on.

I believe that thoughtful consideration of the anesthetist's difficulties and co-operation of the surgeon, combined with a reasonable amount of skill on the part of the anesthetist, will bring most of these very troublesome cases to a satisfactory termination.

## THE USE OF LOCAL ANESTHESIA ALONE OR COMBINED WITH GENERAL ANESTHESIA IN ABDOMINAL SURGERY

By H. A. L. RYFKOGEL AND EVERETT CARLSON \*

*Local anesthesia has a very important place in abdominal surgery.*

*In certain types of patients, particularly the aged and those whose senses have been obtunded by toxic conditions, extensive abdominal operations can be performed with local anesthesia alone.*

*Local anesthesia can be used alone in certain operations where the disease is limited to a single structure and where a general exploration is not indicated, e. g., appendectomy, gastrectomy, gastro-enterostomy, gastrotomy, enterostomy, repair of fecal fistulas, hernioplasties, removals of large tumors of the uterus or ovary, some cholecystectomies, some intestinal resections.*

*In many, perhaps the majority of operations, it is wise to combine a light nitrous oxide, ethylchloride or ether anesthesia with the local. Thus, in certain operations such as gastrectomy, only a brief inhalation of gas while separating adhesions or pulling on the mesenteries is necessary. Experience will teach the surgeon what manipulations produce pain, and the inhalation of anesthesia must precede and not follow them.*

*In operations in which the major portion will require the administration of gas, such as all operations in which the diagnosis is not complete and so require exploration, most pelvic operations, the majority of operations on the biliary tract, operations on nervous patients, etc., complete gas anesthesia should first be induced and then the tissues to be incised or manipulated should be thoroughly infiltrated with the local anesthetic. This combined or "anoci-association" is therefore indicated in the majority of abdominal operations. In order, however, to attain the greatest possible success in the method, the surgeon must train himself in infiltration anesthesia by doing as many operations as possible under local anesthesia alone, because the successful use of combination anesthesia in abdominal surgery depends on the thorough local anesthetization of the abdominal wall and other structures.*

*If no pain impulses pass to the central nervous system from the operative field, relaxation during the operation will be complete, and following it shock will be absent.*

DISCUSSION by Frank R. Girard, San Francisco; A. H. Rosburg, San Francisco; A. B. Cooke, Los Angeles.

IN 1883 Alexander Wood discovered the hypodermic needle, and in 1884 Karl Koller first used cocaine as a local anesthetic in surgery. In 1885 Corning showed that by interrupting the circulation very dilute solutions could be made to produce prolonged anesthesia. In 1900 Braun, having learned that injections of suprarenal extract would slow or almost interrupt local circulation, experimented on himself with combinations of this material and cocaine, and showed that the anesthetic effect of solutions of cocaine were thereby increased and prolonged. In 1901 Takamine isolated suprarenalin, and in 1905 Einhorn discovered novocain. In order to use novocain efficiently and safely, its mode of action must be understood.

If a solution of lower osmotic pressure than the tissue fluid be injected, salts will pass out of the cells into the solution and water will pass into the

\* H. A. L. Ryfkogel (516 Sutter Street, San Francisco). M. D. University of California, 1894. Practice limited to Surgery. Hospital connections: San Francisco Hospital. Appointments: President California Medical Association, 1920; President San Francisco Polyclinic; Lecturer in Surgery, Stanford University. Publications: Several in current medical journals.

Everett Carlson (San Francisco). M. D. Stanford University. Practice: General. Hospital connections: San Francisco Hospital. Appointments: Resident Surgeon, San Francisco Hospital.

A Washington magazine has just closed a contest on "What is a Democrat?" There were 8000 definitions—all different, of course.—Dallas News.

cells. A degree of tissue damage will occur and at first pain will be felt; later anesthesia will appear. Hyperosmotic solutions also produce pain and then anesthesia. In each instance the degree of pain and subsequent anesthesia vary directly with the degree of departure of the osmotic pressure from that normal to the tissue fluid. If an isotonic solution of an indifferent salt, such as sodium chloride be injected, no tissue damage or changes in sensation occurs. Anesthesia by tumefaction, because of the preliminary pain and damage to the tissues is no longer used by surgeons.

Novocain solutions should depend on their selective effect only, and be made isotonic with sodium chloride or other neutral salt. "Cocain and its derivatives are protoplasmic poisons that have an intensely selective action on nerve tissue, paralyzing its function without nerve damage in dilutions too weak to affect other tissues." Novocain in solution, when injected subcutaneously, diffuses partly into the tissue cells and partly into the blood stream, the rapidity of absorption varying directly with the concentration of the solution and with the vitality and activity of the circulation of the part. The slower the circulation, the greater will be the proportion of the novocain assimilated by the cells and the less will be the amount circulating in the blood stream. Novocain forms a loose chemical combination with protoplasm without permanent damage. When this combination breaks up, the novocain disintegrates into its component molecules and so does not enter the circulation as novocain. Therefore, the slower the absorption by the circulation, the greater will be the tissue combination and consequent local anesthesia and the less the general effect.

Dilute solutions, by reason of their slower osmosis, are much less toxic than concentrated solutions. .005 gm. of cocain per kilogram will severely poison a rabbit if given in 5 per cent solution intravenously, whereas poisoning will not occur if six times as much, or 0.3 gm. per kilogram, is injected in .25 per cent solution. Neither does poisoning take place if .03 gm. per kilogram in 5 per cent solution be divided into fifteen doses and administered at five-minute intervals, although one-third of this amount, or .01 gm., will produce instant death if given in one dose.

It is evident, therefore, that the occurrence and intensity of cocain poisoning depend on the concentration of the drug in the capillaries of the central nervous system, and if the drug enters the circulation slowly and well diluted, the tissue cells absorb and disintegrate it before concentration becomes greater than the central nerve cells can stand without paralysis.

The subcutaneous fatal dose of cocain is ten times the fatal dose given intravenously. A 5 per cent solution of cocain containing .1 gram per kilogram of body weight when given hypodermically is fatal, whereas the same dose given in 1 per cent solution produces practically no symptoms. It is necessary to inject five times more the amount of cocain in a .2 per cent solution than a 5 per cent solution to produce poison. Novocain is 1/10 as toxic as cocain, but must be used in twice the concentration to

obtain the same local effect. If .01 gram of cocain be injected intravenously into the hind legs of two rabbits and the legs of one be ligated with a rubber band, the rabbit with the unligated legs will die in a few minutes, while the other will show no symptoms even if the band be released at the end of one hour.

*We can thus understand the value of suprarenalin when added to a solution of cocain or novocain. It slows the circulation of the part into which it is injected to an extraordinary degree, and acts in the same way as the elastic ligatures of the above experiment, retarding the absorption by the circulation and increasing the osmosis into the tissues so that the local anesthesia becomes greater and more prolonged and the danger of general poisoning minimized.*

The precautions that must be taken to prevent general poisoning are therefore evident:

(1) The dilution of the novocain must be as great as possible, consistent with sufficient concentration to suspend the function of nerve tissue.

(2) The solution must be held in the tissues long enough for the novocain to combine with the protoplasm. Suprarenalin or ligatures will accomplish this. The amount of the suprarenalin should correspond with the total amount of the novocain and not with the quantity of solution. Practically for every gram of novocain there should be .001 gr. of suprarenalin, and no more than .001 gm. should be used.

(3) The injection should be made very slowly, partly to prevent forcing the solution into the circulation by filtration and partly because experiments show that solutions injected slowly are less toxic than those injected rapidly.

(4) Great care must be taken not to inject the solution directly into a vein. The needle should be kept constantly moving while the injection is being made. If this is not possible, the needle should be inserted without the syringe; if no blood flows it should be slightly withdrawn and the syringe attached; while the fluid is being forced in, aspiration should be done at intervals to make sure that the point of the needle has not been thrust into a vein. These precautions are especially necessary in the caudal canal or in the neighborhood of the vertebral column, where the venous plexus is rich and absorption therefore rapid.

(5) Solutions should be made osmotically indifferent so as to avoid tissue damage and slow healing.

(6) If suprarenalin be added, care must be taken to use a fresh solution, which should be discarded if it shows the slightest discoloration. Tatum, Atkinson, and Collins have shown that veronal and paraldehyde are antidotes to cocain poisoning. If they bear the same relation to novocain, their administration prior to operation under local anesthesia may prove to be of value.

There is much disagreement concerning the extent to which local anesthesia can be used in abdominal surgery, some reserving it for exploration in extremely ill patients, and others using it throughout all their operations.

In 1866 Richardson did a Caesarean section by



freezing the line of incision with his ether spray; in 1898 Von Miculicz opened abdomens by infiltrating the abdominal wall by the method of Schleich.

In 1907 Lennander demonstrated that the abdominal viscera are almost insensitive to surgical trauma. In 1912 abdominal operations were first done under paravertebral nerve block.

In the same year Finsterer did extensive gastric and intestinal resection by injecting the base of the mesentery. In 1918 Kappis described splanchnic anesthesia by the posterior route, and a little later Braun advocated the anterior approach.

The greatest problem in local anesthesia of the abdominal cavity is the anesthetization of the posterior peritoneum.

The retroperitoneal tissue of the abdominal parietes everywhere contains a very rich plexus of sensory nerves. The slightest injury, rubbing, cutting, pinching or pulling of the parietal peritoneum is therefore very painful. The least traction on the mesentery always produces pain, but whether this is due solely to pulling on the peritoneum and retroperitoneal tissue at its base, or in part on special cerebrospinal nerves that pass through the greater and lesser splanchnics, is still not certain.

The major portion of the parietal peritoneum is supplied by the last seven dorsal, all the lumbar, and the upper sacral nerves. It is easy to anesthetize the anterior and lateral parietes by direct infiltration, but not so easy to reach the posterior peritoneum.

It is possible to anesthetize the whole peritoneum by paravertebral block, but the numerous punctures necessary and the danger from depositing a large amount of concentrated solution near the spine have caused this method, except in certain operations, to be abandoned.

Kappis, Finsterer, Braun and others believe that the mesenteries and viscera are supplied with sensory fibers through the greater and lesser splanchnics by way of communicating fibers from the sixth to the twelfth dorsal nerve, and claim that by blocking these in front of the first lumbar vertebra, operations on the stomach, duodenum, upper ileum, and biliary tract can be done without pain.

Recently, however, Meeker of the Mayo Clinic did a series of forty-two operations on the stomach, duodenum, and gall-bladder, using splanchnic anesthesia, and contrasted them with a similar series in which only the anterior abdominal wall was infiltrated.

General anesthesia during part of the operation was necessary in some of the operations in both series; but of those done with splanchnic block 38 per cent required gas or ether, as against 28 per cent of those in which the splanchnic area was not injected.

Meeker, however, used only 30 cc. of one per cent solution, as contrasted with 100 cc. of one per cent used by Kappis and Braun, or 75 cc. of one-half per cent by Finsterer.

Experiments by Meeker showed that 30 cc. was enough to infiltrate the splanchnic nerves, and from this it seems probable that the larger injections, which seem so successful in the hands of European

surgeons, act by saturating and anesthetizing the peritoneum and retroperitoneal tissue at the basis of the mesenteries, and not by blocking the splanchnic nerves.

The peritoneum of the pelvis is easily anesthetized by transsacral, caudal, or preferably presacral block.

The surgeon must remember that novocain inhibits the conduction of pain before that of touch, and that the apprehensive patient will often be greatly disturbed by being conscious of the surgeon's manipulations within the abdomen, though they do not actually produce pain.

The greatest possible gentleness is thus necessary, and all motions must be deliberate and slow.

Sudden traction must be avoided and care be taken not to pull ever so lightly on the parietal peritoneum or the mesenteries beyond the anesthetized areas.

Forceful thrusting the intestines from the operative field by gauze packing and a strong arm must not be attempted, and is usually unnecessary because if the anterior wall is thoroughly infiltrated and the incision of ample length, the intestines will fall away as in a cadaver; then by posture and very gentle elastic or spring retraction and packing the necessary exposure can be made.

From the moment of the first skin prick, every possible care must be taken to avoid causing the patient's sensations of touch or pain. Every additional hurt or discomfort helps to break the patient's courage.

If in the course of the operation the surgeon sees that the next step will produce pain, a small amount of gas or ether for a few moments will enable the patient to go through the subsequent painless steps with equanimity.

A tactful anesthetist, by distracting the patient's attention, can do much to avoid general narcosis, and if properly trained can keep the patient relaxed with an extraordinarily small amount of the anesthetic when the tissue has been properly infiltrated.

When a general manual exploration of the abdominal cavity is necessary, gas should be given while it is being done. The freeing of adhesions and the delivery of organs sometimes, but not always, require transient general anesthesia.

For example, in fifteen of our recent gall-bladder operations local anesthesia was used. Of these, nine required no general anesthetic; yet only two of the nine were free of adhesions.

One of the six requiring general was a neurotic patient who, in spite of splanchnic block and thorough infiltration of the abdominal wall, required very deep anesthesia to remove a nonadherent gall-bladder containing no stones.

The majority of appendectomies during the interval can be readily done under local anesthesia.

In acute appendicitis we have usually found it necessary to give gas while the organ is being separated, if adherent and delivered. For its actual amputation and for closure, gas is unnecessary.

The patient often complains of severe colic at the most gentle attempt to lift up the colon, and may state that the pain is the same as that he has been having in his attacks.

Gastro-enterostomy, or even gastrectomy, can often be done by anesthetizing the area of the incision in the anterior abdominal wall. The incision must be so long, however, that no traction is necessary.

In our service we have made but little use of splanchnic block, preferring flooding the posterior peritoneum when accessible, as in gall-bladder operations, or infiltrating, if necessary, the mesentery in gastric or intestinal operations.

However, of the four cholecystectomies in which we used the splanchnic block, no general anesthetic was needed in three. The fourth was a flat failure.

Surgery of the pelvic organs can be readily done under transsacral or presacral block. This method is particularly useful in removing large tumors in very weak patients. The anterior abdominal wall is flaccid and the intestines have been displaced by the tumor, so that after delivery no painful packing is needed. We removed a twenty-five-pound fibroid from a woman 75 years of age with a blood pressure of 225; and from a woman of 50, two ovarian adenocarcinomas which greatly distended the abdomen.

Neither complained of discomfort during the operation, nor had the slightest shock following.

When ample exposure must be obtained by packing as in the usual pus-tube case with extensive adhesions, we believe general anesthetic the method of choice with, however, thorough blocking of the anterior abdominal wall for the purpose of minimizing the amount of gas or ether used and making relaxation more complete. (In young, vigorous patients we prefer ether.)

In certain of the acute abdominal diseases, in which the patients are very ill or are in shock or collapse with low blood pressure, local anesthesia has its greatest value, especially when associated with blood transfusion or dextrose and insulin injections.

Appendiceal abscesses, perforating ulcers, empyema or partial gangrene of the gall-bladder and intestinal obstruction come in this category.

All operations on old people are more safely done under local anesthesia. In young dogs McNider has shown that ether anesthesia produces no disturbance in the acid base balance of the blood, and but little change in the amount and character of the urine or the elimination of phenolphthalein.

In dogs over 4 years old, however, a two-hour etherization markedly reduces the alkali reserve and phenolphthalein output, and causes the appearance of albumen and casts.

In intestinal obstruction evisceration can be safely made through an ample incision. A stimulating dose of ether for a few moments is here very useful.

The advantages of local anesthesia in abdominal surgery are: (1) It eliminates shock. (2) Vomiting is almost entirely absent. (3) Intestinal atony and gastric dilatation are but rarely observed. (4) Peritonitis is less frequent. (5) Mortality from pulmonary complications does not occur.

Pulmonary morbidity is apparently as frequent as in operations under general anesthesia, but the

patients do not die. The statistics to this effect are abundant and convincing.

After any abdominal operation the painful wound hinders the patient in his efforts to expel the stagnating bronchial secretions in which bacteria grow.

If anthrax bacteria be smeared on the laryngeal mucous membrane of rabbits anesthetized with chloroform or ether and the anesthetic be stopped before fifteen minutes, the animals will live, but after one hour's anesthetization will perish from anthrax pneumonia. This lowered resistance of the tissues presumably accounts for the fatalities from pneumonia that follow long operations under ether anesthesia.

Following all abdominal operations, especially those on the gastro-intestinal tract, the patient should be urged frequently to expel the bronchial mucus while an attendant supports with his hands the abdominal wound.

(6) The necessity of speed is less in local anesthesia, and so in bad-risk patients more careful dissection and suturing can be done. (7) The careful handling of the tissues necessary is a most valuable training to the surgeon in what Sterling Bunnell has called atraumatic surgery. (8) Bleeding is less than under general anesthesia. (9) Post-operative acidosis is much less following local than general anesthesia.

#### DISCUSSION

FRANK R. GIRARD, M. D. (Flood Building, San Francisco)—Regional anesthesia is now one of the permanent methods of anesthesia. About this there can be no question. As the technical skill required for this form of anesthesia is better developed, especially in our younger men, we are going to see a steady increase in the use of this form of anesthesia. Up to recently, local anesthesia was considered useful only in minor operative procedures, but its greatest field of usefulness unquestionably is in the gravest major surgery.

Doctors Ryfkogel and Carlson have shown this very clearly in their excellent presentation of the subject. I am in hearty accord with the statements made by the authors, and in my own work have been doing an increasing number of major operations under regional anesthesia each year.

The lack of shock and general well-being of patients after prolonged and serious operations performed under local anesthesia, with or without a little nitrous oxide, stands out in a dramatic manner when compared with the same operation performed under ether. This I attribute not so much to the kind of anesthesia used as I do to the fact that under local anesthesia only the gentlest manipulations are permitted by the patient, and surgeons working with local anesthesia become expert in handling the tissues with the greatest care and gentleness. It is too bad that the same gentleness is not used when operating under ether, but unfortunately such is often not the case.

For some time past I have been giving to nervous, apprehensive patients scopolamin and morphin before operation. Scopolamin gr. 1/150, morphin gr. 1/6, one hour before the operation is begun. In very nervous patients I occasionally give an additional dose of scopolamin, gr. 1/200, but no morphin one-half hour after the first dose.

Following this treatment, the patients arrive in the operating-room quite drowsy, but they can be awakened. The preparation of the site of operation and the injection of the novocain cause little or no disturbance, and I have frequently done extensive operations on the gall-bladder, stomach, and intestines, with no other anesthetic than that injected into the abdominal wall. It must not be construed from the above, however, that all patients respond like this. I make it a rule to have a gas machine and anesthetist at the patient's head, to be used, if only



for a few moments, whenever the patient shows signs of objecting.

I wish to commend the authors for bringing the subject of regional anesthesia to our attention in such a clear and forceful manner, and I hope that their work may enthrust others to go and do likewise.

A. H. ROSBURG, M. D. (Flood Building, San Francisco)—The authors have covered the subject of regional anesthesia in abdominal surgery well, and I feel that there is very little or nothing for me to add; however, a few words on the salient points of this paper might help to convert some of our ether-pouring friends to the use of this most wonderful method of anesthesia and incidentally save a few lives.

I think that most surgeons will agree that an ether anesthetic given by a well-trained anesthetist and not lasting longer than one hour is a fairly safe anesthetic, but if given over a longer period of time certainly becomes an outstanding etiological factor in the production of post-operative pneumonia.

In the hands of well-trained surgeons regional anesthesia with or without gas and oxygen, and a little ether while closing the peritoneum, is in my opinion the safe, ideal and beautiful anesthetic both for the patient and the surgeon.

As stated by the authors of this paper, the patient often develops post-operative pneumonia in spite of the fact that no ether was given; but the pulmonary infection is of a low-grade type and the patient does not die. I wish to go on record with the authors that that has been my experience in more than a hundred cases.

It goes without saying that a well-trained anesthetist, whether gas and oxygen is to be given or not, must be present at the head of the operating-table during the entire time of the operation. His duty is to watch the pulse, respiration, color of patient, etc., and to engage the patient in some interesting conversation not related in any way to surgery. This part of the operation is as important as the novocain itself. I once performed a herniotomy on a boy 10 years old under regional anesthesia and, although he admitted that he was having absolutely no pain, he became so nervous and hysterical that I was just about to call an anesthetist to give the boy some gas and oxygen, when a young orderly happened to come into the operating-room and engage the patient in a conversation about baseball. A whole can of ether or a whole tank of gas couldn't have quieted the patient any better than did this orderly. Since that time I have always asked for an anesthetist, whether the anesthetic is to be general or local or both.

The solution used should never be over .5 per cent strength novocain with four drops of the stock solution of adrenalin to the ounce of solution added. I am convinced that one can inject as much as 500 cc. into an adult at one time with perfect safety. The anesthesia is much safer and much more satisfactory when a large quantity of a weak solution is used in place of a small quantity of stronger concentration. If you inject large amounts of a weak solution of novocain in or near the right place, you will always have good anesthesia.

A most important point brought out by the authors, and often not thought of by the surgeon who uses local anesthesia only occasionally, is to keep the needle moving constantly while injecting the solution in order to avoid injecting any large amount into a blood-vessel, as novocain in any strength injected into the blood stream is very toxic.

It has been my experience that better anesthesia is obtained when the splanchnic area is injected than when only local infiltration of the peritoneum is done. The difficulty is that it is often impossible to inject the splanchnics without causing considerable pain by the necessary manipulations. In these cases I like to give a little gas and oxygen for a few seconds while the injection is made, allowing the patient to awaken just as soon as the infiltration has been finished.

Morphin and atropin should be given before the operation in the same manner that it is given before an ether anesthetic. The use of morphin and scopolamin in repeated doses to produce the so-called twilight sleep is not very satisfactory, and carries an element of danger. It could be used with regional anesthesia with great

success if we had trained psychoanesthetists, noiseless surgical instruments, quiet assistants, and all the other requirements that go with good twilight-sleep anesthesia.

I have used regional anesthesia in several hundreds of abdominal operations, and have found that it is necessary to give a little gas and oxygen while injecting the splanchnics, as mentioned before, and while exploring the abdominal cavity; and to give a little ether in some cases while closing the peritoneum. It is always better to give a little ether in those cases where the abdominal cavity seems too small for its contents while closing the peritoneum than to waste a lot of time pulling and tearing the tissues.

I am glad that the authors brought out the fact that regional anesthesia in abdominal surgery teaches the surgeon to handle the tissues with care. No matter how well the region to be operated upon is blocked and infiltrated, the patient will not stand for any rough handling of the tissues.

Another great advantage of regional anesthesia over ether anesthesia, and one overlooked by the authors, is for the teaching of operative surgery. It takes a good experienced surgeon from ten to thirty minutes to do an appendectomy or a herniotomy. An ether anesthetic given for that length of time would probably harm no one. An inexperienced intern requires from one to two hours to do either one of these operations. An ether anesthetic given for that length of time is injurious, and one would naturally feel that the patient was not getting a square deal by having an intern perform the operation. By using regional anesthesia that danger is done away with, and the poor struggling intern who must get his first experience some time, although a great many surgeons don't seem to think so, is given a chance to perform his first operations under the supervision of a good surgeon.

I wish to compliment the authors on the concise way in which they have presented their paper and want to thank them for having asked me to discuss it, as I have been deeply interested in regional anesthesia for several years. Although I feel that I have added very little or nothing, I hope, together with the authors for the sake of humanity, that their most timely paper on one of the most important branches of medicine and surgery will bear fruit. We still have too many users of ether; and the sad part of it all is that the majority of these same surgeons are slow operators. A sad combination, to say the least.

A. B. COOKE, M. D. (1019 Hollingsworth Building, Los Angeles)—If local anesthesia is ever to come into its own, it can only be when its relative safety and reliability in the hands of the average surgeon have been definitely established. This is not the case at the present time. Ryfkogel and Carlson represent the exceptional rather than the average.

Employed by the novice, the methods advocated all possess an appreciable element of danger. Even the well-trained surgeon, unless he has perfected himself in the technic of their use, cannot expect more than indifferent success.

I can think of only two means of really advancing the cause of local anesthesia:

First: The anesthesia specialists should realize that local anesthesia is not only an important but an essential part of their specialty and qualify themselves accordingly, so that the surgeon would be able to select this method when indicated, as now he specifies gas or ether for the case in hand.

Second: The recent graduate who finds himself attracted to surgery should recognize the increasing prominence of local anesthesia with the public as well as the profession, and devote himself to the mastering of its technic.

That local anesthesia actually possesses the advantages enumerated by the essayists, is beyond dispute. The fact that it exacts the most scrupulous gentleness in every stage of the operative work is alone sufficient to counterbalance all difficulties and disadvantages.

I am not so enthusiastic as to believe that the method is best for all or even the majority of cases. Certain types of patients and certain kinds of cases will probably always be better handled under general anesthesia. The

psychic factor cannot be ignored. For example, I am convinced that a highly toxic goiter is far better attacked with the patient's consciousness abolished in a large proportion of cases.

The paper of Doctors Ryfkogel and Carlson is an admirable presentation of the subject, and all the more so because it is based on their own personal experience.

#### CLOSING OF DISCUSSION

DOCTOR RYFKOGEL (closing)—If the several simple precautions detailed in our essay are taken, local anesthesia is much less dangerous than any general anesthetic, especially if the remote as well as the immediate effects are considered. That its use requires training and experience is, of course, true, but this applies to all surgical procedure.

In recent months some who represent cults or quacks have sought to secure publicity by challenging members of the medical profession to debate such questions as, "Does Smallpox Vaccination Prevent Smallpox?" "Do Sera Benefit Humanity?" "Has Animal Experimentation Been of Benefit to Science?" Whether or not smallpox vaccination or diphtheria immunization are effective, are no mere academic subjects to be settled by the shrewd dialectician. They are matters which have been scientifically demonstrated. Unfortunately, many who attend such debates are not seekers after knowledge, but partisans whose opinions are fixed. A debate merely shows which of the contestants is the shrewder, wittier or more adroit. If the defender of a truth has feeble skill, it in no wise minimizes such truth. We are of the opinion that no effort is too great to instruct or to counsel, but we count it a loss of time and energy to merely stage a verbal contest.—Department of Health Weekly Bulletin, New York.

It takes ten or twenty years for a knowledge of new discoveries and medical standards to be understood and accepted by laymen. The people are a generation behind the times in their knowledge of what can be done for the mentally sick, and physicians usually have great difficulty in getting the patients and their families to accept the diagnosis of mental trouble that is plainly evident to the doctors. The popular opinion of a mental disorder is that it is a disgrace which is to be concealed as long as possible. The opinion is similar to that regarding tuberculosis twenty-five years ago. Physicians have the opportunity to change that opinion, just as they have educated the people regarding tuberculosis.—New York State Journ. Med., June 1, 1926.

We survey the dwindling American family and moan and beat our breasts. "Grandma," we say, "had fourteen children, and today three are considered a houseful." We forget that the fourteen children were assets to grandpa just as soon as they could pull weeds, while the three contemporary blessings are liabilities. We also overlook the new fact that under urban conditions poverty and infant mortality go hand in hand. Our cities were not planned, they just grew. If the average American family today comprised ten children, uncounted thousands of them in cities would be doomed to early death. And we cannot now help that, for we face a great many decisions about cities that we rendered long ago by default.—Chester T. Crowell.

Of all hospital beds, the proportion controlled by the national government has increased from 2.1 per cent in 1909 to 2.3 per cent in 1914, 3.1 per cent in 1918, 6.8 per cent in 1923, and 7.1 per cent in 1925. There are now 299 hospitals maintained by the national government with a total capacity of 57,091 beds, of which an average of 42,377, or 74.2 per cent, are constantly occupied. These figures cover the hospitals maintained by the United States Army, Navy, and Public Health Service, the Veterans' Bureau, and several hospitals for government beneficiaries located in the District of Columbia and elsewhere.—J. A. M. A.

## INDUSTRIAL LIABILITY FOR CANCER

By ALSON R. KILGORE AND CURTIS E. SMITH \*

*It has become the practice of commissions to hold occupational injury responsible for cancer under certain conditions.*

*These conditions have been laid down and generally accepted by authorities, and compensation should be awarded as the conditions are or are not fulfilled in individual cases.*

*Insurance carriers should protect themselves as well as the employee by insisting on repeated examination after the immediate effects of trauma have cleared up in all cases of injury of a type likely to result in cancer. If cancer is demonstrated as soon as the swelling of contusion has gone down, the inference of pre-existing cancer can be made and injury absolved from responsibility for starting the growth. On the other hand, if cancer does develop it may be found early enough to make surgical cure possible. These considerations are especially applicable to the breast.*

DISCUSSION by Charles E. von Geldern, Sacramento; Philip Stephens, Los Angeles; R. W. Harbaugh, San Francisco.

THERE seems to be no way in which it can be scientifically demonstrated that injuries cause or do not cause malignant tumors to develop. With the exception of the use of certain chronic irritants (usually chemical), we know of no successful attempts to produce tumors experimentally by trauma. And, in view of the frequency of spontaneous tumors and the always present possibility of simple coincidence, it is unlikely that we shall soon be able to obtain positive proof that any individual human tumor has arisen as a direct result of injury.

There is, however, certain evidence based on observation and experience, from which deductions may be drawn for practical medico-legal purposes:

(1) The conversion of a benign lesion into a malignant one by a single trauma. The best example of this is the pigmented mole, changed into malignant melanoma by the injury of incomplete surgical removal. The fact that this occurs is partly to blame for the popular notion that pigmented moles should not be disturbed, inasmuch as laymen have observed the development of hopeless cancer after such moles have been cut into, part of the mole being left.

A still more interesting example of this change, though one not so commonly observed, is the development of sarcoma from the myxoma of bone when disturbed without complete removal. The cells of myxoma of bone implant in surgical wounds probably more constantly than is the case with any other tumor tissue, and while the primary, undisturbed myxoma does not usually metastasize, the recurrences after implantation or incomplete removal change their cellular character definitely into that of sarcoma and metastasize with great constancy.

(2) The development of cancer at sites of chronic irritation. This is so common as to be generally recognized, the irritation being either mechanical,

\* Alson R. Kilgore (490 Post Street, San Francisco). M. D. Harvard University. Practice limited to surgery. Hospital connections: Assistant Visiting Surgeon, San Francisco Hospital. Appointments: Instructor in Surgery, University of California Medical School. Publications: Various articles on cancer in current periodical literature.

Curtis E. Smith (490 Post Street, San Francisco). M. D. Harvard University. Practice limited to surgery. Appointments: Zone Surgeon, United States Fidelity and Guaranty Co. Publications: Various articles on surgical and pathological subjects.



as in the case of a jagged tooth cutting the tongue or cheek, or chemical as in the case of the coal-tar products, or by heat. These sources of cancer will be taken up in more detail later.

(3) The results of careful history-taking and analysis in large series of cases. One finds enormous variation in the percentage of tumors ascribed to trauma by various authors, and apparently the more careful the history-taking and the more critical the analysis, the smaller the percentage so ascribed. Yet practically all the authorities agree that there is an irreducible minimum of cases in which the evidence is very convincing. W. B. Coley,<sup>1</sup> who writes both as a pathologist and as a corporation surgeon, makes the statement "that a single local injury may cause a carcinoma as well as a sarcoma, is no longer open to speculation. The relationship in no way depends on our ability to offer scientific explanation, nor does it depend on any one of the various hypotheses of the origin of cancer." Kaufmann<sup>2</sup> states that there seems to be reasonable connection between trauma and benign tumors in 2 per cent, between trauma and carcinoma in about 2 per cent, and between trauma and sarcoma in about 5 per cent, and estimates that 12 per cent of bone sarcomas are of traumatic origin.

(4) The development of cancer at the site of burns. This has been repeatedly observed as a late sequence of old burn scars, but the recent literature contains reports of at least two instances of the prompt development of cancer after burns, both incidentally of industrial origin. Mischell<sup>3</sup> reports the development of a typical squamous cell carcinoma within three months in an unhealed ulcer of the arm following a sulphuric acid burn. Chambers<sup>4</sup> reports a similar growth within four weeks in the case of a laundry fireman who burned his arm against a furnace door, the original burn having remained unhealed.

(5) The effect of injury on the rate of growth and especially the rate of metastasis of a tumor already present. Under our present compensation laws, in California at least, industry is liable if injury arising out of employment exaggerates conditions previously existing or materially hastens death from disease already present. There is abundant evidence that trauma may both increase the rate of growth of a tumor and also (and much more important) increase its rate of metastasis and consequently shorten life.

An excellent example of the first effect came under our observation in the case of a man who had several metastatic nodules on the toes and foot from a malignant pigmented mole. One of the nodules was struck by the edge of an oil drum, and within the next three or four months the injured nodule had grown to the size of a hen's egg, while the others, uninjured, had grown almost imperceptibly. Here was an exceptional opportunity for comparison of growth with and without injury, of the same tumor tissue in the same individual with all conditions alike except that of injury.

Rapid metastasis after injury is the rule in the case of breast cancers, incompletely removed by the

caustic pastes of the quack, and malignant growths subjected to massage.

#### ESTABLISHING INDUSTRIAL LIABILITY

We cannot, therefore, dismiss without careful consideration any case of malignant disease in which injury is alleged as a factor. In discussing industrial liability, several phases of the problem appear:

1. The effect of a single injury.
  - (a) Did it cause the growth to develop in the first place?
  - (b) Did it increase the rate of growth of a tumor already present?
  - (c) Did it increase the rate of metastasis from such a tumor?
2. The effect of repeated injury or irritation.
3. The late effects of past injuries.

#### I. SINGLE INJURY AS A CAUSE OF TUMOR DEVELOPMENT

Authorities generally have agreed that certain reasonable conditions must have been fulfilled before the injury can be held responsible. These have been summarized by Ophüls<sup>5</sup> in an excellent presentation of the subject:

1. The fact of injury must be proved.
2. The injury must have been reasonably severe.
3. The growth must develop at the site of injury.
4. It must appear reasonably certain that no tumor was present before injury.
5. The growth must appear within a reasonable time after injury. The limits have been somewhat arbitrarily set, and are generally accepted at three weeks at the least and three years at the most.

To make clear the application of these rules, it will serve best to consider them in connection with one of several cases in which the insurance carrier was held liable by the California Commission, and also to a case in which no liability was adjudged.

CASE 3406—A woman of 43; kitchen helper. Her left breast was struck by a heavy iron pot which fell against her from a shelf. Pain and swelling of the breast was immediate and increased for two or three days, when she was examined by a physician and sent to the hospital for treatment. Examination then showed the entire breast swollen, with discoloration somewhat obscured by an iodine blister of the upper outer part of the breast.

She was not seen again after discharge from the hospital for nine months, when she discovered by accident a fairly large lump in the breast, which the examining physician then found to be in the upper outer quadrant of the breast. There was already extensive metastasis, and she died a few months after operation.

The facts in this case may be summarized in accordance with the conditions above, as follows:

1. The fact of injury was established.
2. The injury was severe enough to justify the physician in sending her to the hospital for its treatment.
3. The site of injury was well established by the nature of the injury itself and by the burn from iodine application found at examination. The tumor appeared at this site.
4. The equivocal evidence that no tumor existed previously is the weakest link in the chain, as it usually is. The patient's statement is of little value. Examination during the time when the whole breast was swollen and indurated cannot be depended upon to rule out the presence of a single definite lump. No examination was made after the patient's discharge from the hospital until she herself found a cancer nine months later. The insurance

carrier very definitely failed to protect both itself and the patient by insisting on one or more examinations of the breast at intervals after the swelling had gone down, when an examination would have been worth something.

5. The tumor did appear after three weeks and within three years of the time of injury.

This applicant was awarded full compensation.

CASE 2396—A laborer of 51 alleged a blow by an iron bar on the chest at about the tenth rib. He worked for six weeks, was then laid off and directly afterward complained of pain in the spine, became bedridden, cachectic, and finally died about eighteen months after injury. Autopsy showed primary carcinoma of the lung, with metastasis to the second lumbar vertebra and elsewhere.

1. The fact of injury was not established except by the patient's statement long afterward.

2. The injury was not severe enough to require any immediate treatment.

3. The growth did not develop at the site of the injury on the rib but in the center of the lung, nor did the metastasis occur at or near the injury but in the vertebra well below the level of the chest injury.

This applicant was denied compensation.

## II. SINGLE INJURY INCREASING RATE OF GROWTH OF METASTASIS

Here again, positive proof is impossible to obtain because the rate of metastasis varies so greatly in tumors of the same apparent character. When, however, an individual in apparently good health receives a severe injury in the region of a growth, fails to recover even from the ordinary effects of injury and goes on to death in an unusually short time for the type of malignant growth present, the reasonable presumption is that the injury hastened death, inasmuch as we are sure that injury can have this effect.

CASE 2029—A man of 64, thrown from an automobile, landed on his abdomen and slid a few feet along the ground. He had been absolutely well before (seen nine months previously by a good physician, and physical examination then negative; weighed a day or so before injury, and was four or five pounds above usual weight).

He tried once or twice in the next three weeks to go out on automobile trips, but could not because of abdominal distress. One month after injury, his physician found epigastric tenderness and a doubtful small nodule below the ensiform. Two weeks later this nodule was the size of a walnut. X-ray then showed an extensive carcinoma of the midportion of the stomach. Definite but slight liver enlargement was noted at this time. A month later he was dead, and at autopsy it was noted that his liver was "three times normal size" and thoroughly riddled with carcinoma.

Here was a man in whom what was apparently a metastatic nodule was felt in the omentum a month after injury. It is almost inconceivable that a carcinoma could have originated in the stomach after the injury and given palpable metastasis so soon, so that the injury was not reasonably to be blamed for originating the growth. On the other hand, the metastases observed grew with astonishing rapidity, and the man was dead in less than three months. The average duration of life from the first symptoms in cancer of the stomach is at least nine months, and the Commission ruled that it was reasonable to hold the injury responsible for definite shortening of life.

## III. EFFECT OF REPEATED INJURY IN INDUSTRY

That malignant disease commonly develops after long continued irritation, is much better established than that it is after a single blow. More and more examples of this process are coming to the atten-

tion of industrial bodies, and a few of the better established types will be mentioned:

(1) *Dye Worker's Cancer*<sup>6</sup>—Bladder cancer in anilin dye workers has been recognized in Germany since 1895. Over one hundred cases had been collected to 1920. It is of interest that the cancer appears usually several years after the first exposure in the factory, but it is not necessary that exposure should be kept up constantly until the development of tumor. In many instances the bladder cancer appeared in workers who had been out of contact with anilin dyes for ten years or more. It is also of extreme importance that in one factory where many cases were observed special safety appliances to prevent unnecessary contact with the chemicals, as well as education in special hygiene, were established in 1905, and no cases developed during the succeeding fourteen years in workers who began their exposure after the installation of these precautions.

So far this particular type of industrial cancer offers little local interest in California.

(2) *Paraffin Worker's Cancer*—Ross<sup>7</sup> has made an exhaustive survey of this disease, including with it cancers arising from the handling of coal products as well as those from petroleum. He finds that coal workers and handlers of coal-dust are free from trouble. Workers with blast-furnace pitch, a product from distillation at high temperature, mechanically irritating, but nearly free of oil, are also rarely subject to skin cancer. Gas tar pitch, on the other hand, a product of lower temperature distillation, containing more liquid distillate, is responsible for a considerable number of "paraffin warts" with secondary degeneration into cancer, while soot, carrying with it a large amount of low temperature volatile products, is responsible for most cases (e. g., the familiar chimneysweep's cancer).

He points out the interesting fact that cancer rarely, if ever, can be blamed on coal itself, with its mechanically irritating grit and dust, while most of the tumors in this group arise from products of distillation, not specially mechanically irritating. He deduces that there must be a specific chemical in coal and paraffin distillates, more productive of cancer the more concentrated it becomes.

In Scotland shale oil deposits have already been worked sufficiently long to have given rise to similar industrial epitheliomas. There is apparently some difference between various shale deposits in the cancer incidence among workers. Now that we are beginning to work shale deposits in this country, we shall probably see instances of industrial cancer from this source.

(3) *Cotton Spinner's Cancer*<sup>8</sup>—The English courts last year awarded compensation in a case of cancer of the scrotum in a "mulespinner" whose occupation brought him into contact with a moving bar causing friction near the scrotum; at the same time his overalls in this region were kept sprinkled with liquid petrolatum. Both mechanical and chemical injury may therefore have been factors in cancer production.

After this case was decided, the labor organiza-



tion traced eighty-nine cases of scrotal cancer in their membership since 1920, 30 per cent of them already fatal—a very serious industrial compensation situation.

#### LATE DEVELOPMENT OF CANCER FROM OCCUPATION

In the last group discussed, cancers arising from chemical irritation, it is apparent that cancer may develop several years after the exposure to chemical irritation and perhaps after the employee has changed his occupation. Under our present California law it appears that in such a case the employee would not be entitled to compensation insurance benefits, and yet he would be the subject of occupational injury just as certainly as if he suffered a fracture from a single accident. This problem may eventually require legislative attention with adjustment of the statute of limitations in such cases, in order to give the employee the full benefit of the compensation principle.

#### DISCUSSION

CHARLES E. VON GELDERN, M. D. (1010 Forum Building, Sacramento, California)—The paper of Doctor Kilgore and Doctor Smith leaves little for a discussion. All the important points have been covered clearly, concisely, and with proper emphasis.

I have encountered a number of cases where the patients or their heirs made the claim that the malignant growth followed injury, but I have seen only two (a sarcoma of the testis and an osteosarcoma of the scapula) where I felt that the trauma might have been the causative agent.

One of the cases described by the authors is familiar to me, namely, Case 2029. I do not agree with the findings of the Commission, for subsequent evidence showed that the patient did have symptoms for a considerable time prior to his injury.

This paper, though merely a reiteration of established opinions and facts, is a most valuable one for publication. The medical profession as a whole is not free from the fallacious "post hoc ergo propter hoc" reasoning, and such papers as this should tend to curb the unwarranted testimony of highly opinionated persons.

PHILIP STEPHENS, M. D. (1136 West Sixth Street, Los Angeles)—Any addition to our literature which will throw added light and furnish real scientific opinion on which to base decisions and awards in our compensation work is a godsend both to the surgeon caring for these questionable cases and to the commission making the awards. Kilgore's contribution is of this class.

The present compensation law has developed a peculiar psychological phase in the mind of the worker. If he develops any disability whatsoever, he attempts to assign a cause for it in some past trauma; and with this mental phase, no doubt the increased number of traumatic new growths will be legion.

While not denying that trauma does cause the actual development of malignancy, that hyperplasia incident to the inflammation and apposite to injury may continue on into neoplasm or even malignant neoplasm, the process is extremely rare. The tumor of bone or region affected goes through a certain initial stage in its development, where the pain or discomfort is so slight or absent that it is not noticed until sharply struck or injured by the laborer, who is so apt in his daily work to sustain such injury, and with the later state of actual tumefaction and increasing pain and disability the accident is sought for and the trauma and pain remembered. Our histories are, therefore, difficult to get and more difficult to interpret to the extent where we can place scientific confidence in them.

Malignancies due to a single injury are the most interesting and yet questionable, and I must add state compensation case No. 320,702, a Mexican laborer who sus-

tained a severe bruise of the left sacral region, and within thirty days developed a tumor mass which was incised and found dry. Later, within the year, a radical operation was performed. Post-mortem examination showed not only sarcoma of the sacrum, but metastases of lung and clavicle.

I strongly recommend the careful perusal by all interested the article by Dr. H. E. Mock and John D. Ellis, *Journal A. M. A.*, January 23, 1926.

R. W. HARBAUGH, M. D. (350 Post Street, San Francisco)—The relationship between trauma and various types of malignant growths is a problem which scientific medicine has up to date been unable to solve.

From the standpoint of causation, there will always be some doubt until we have solved the question of origin. There seems to be little doubt, however, that under certain conditions trauma does accelerate the growth of certain tumors. It is usually difficult to prove that the tumor was in existence before the injury. In most instances this proof is impossible to obtain. Many rather authentic examples of exacerbation can be added to those cited by the authors of this paper:

A. A man fell from a ladder and struck upon his shoulder, fracturing the outer end of the clavicle without any displacement. X-rays were taken within a few hours after the accident. One month later, after union was apparently firm, the patient began to cough and complain of pain over the fracture site. X-rays showed a large growth at this place now, and a careful review of the original pictures also showed a tiny growth. The conclusion is, then, that the accident accelerated the growth.

B. As a parallel case. Patient sustained a spiral fracture of the femur. A study of the x-rays taken shortly after injury did not reveal any tumor. The fracture was treated by the closed method for a period of a month or more and then, when it became necessary to operate, a spindle cell sarcoma was found at the fracture site. No one can positively say whether this blow merely caused an already existing tumor to grow rapidly or whether it was really the factor in causing the growth to form.

My belief is that it has been reasonably proved in many cases that trauma has an influence on the growth of certain tumors. Whether there is an absolute relationship as to their origin, I think there is more doubt.

The paper of the authors will be of value to any commission in deciding their cases.

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The advertising profession has the same interest in exterminating false, fraudulent, and misleading advertising that the stock exchange has in barring wildcat stocks, or the medical associations in suppressing quacks, or the bar associations in excluding shysters. Advertising depends on the confidence of the public, and any betrayal of that confidence weakens the effect of honest advertising.—Ernest Elmo Calkins, *The Atlantic Monthly*, May, 1926.

When you stop for a meal along the trail, take a little scouting trip over the immediate vicinity and see where the flies are feeding. Then ask yourself if you want to eat there. Chances are you won't, unless you can effectually protect your food from those friendly filth disseminators.—Ohio Health News.

## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### THE SYMPTOMS AND EVIDENCE THAT WARRANT A DIAGNOSIS OF PYLORIC STENOSIS IN INFANTS.

The Editor—The distressing sacrifice of young lives to pyloric stenosis is largely due to delay in consulting competent physicians early enough. Similar delays are responsible for many other deaths and for much morbidity later in the lives of many children.

Many factors contribute to such delays, among them ignorance, vacillation, doubts on the part of parents, the stupid propaganda of neighbors and the standardized hokum handed out through the medical departments of magazines, department stores, chain letters, clubs and uplifting bodies of many kinds.

Pyloric stenosis is but one of the many dangers that threaten the lives and future health of infants which require the earnest personal service of the competent physician to discover and remove.

The dangerous advice of grannies of other days in the rearing of children has been largely replaced by equally incompetent services of so many kinds that the poor parents do not know whom to trust.

Every infant should be seen by the family physician at least once a month until it is one year old, and he should be the one consulted whenever a suspicion that all is not well exists.

Letters about Bedside Medicine for Bedside Doctors still continue to be encouraging, and although a number of subjects are now under discussion, we need a new one for each issue. If you have a subject in mind send it in.

Alanson Weeks,\* M. D. (384 Post Street, San Francisco)—So much has been written on congenital pyloric stenosis that one should have the right to feel that no baby with this condition is being overlooked and a wrong diagnosis made. We are certain from many experiences that this is not the case. Babies are still being brought in wasted to the danger point when they should have long since either come to operation or have been cured by medical measures. It seems inconceivable that the condition which has such a plain set of symptoms could be diagnosed incorrectly. We have the record of one mother who made the diagnosis in two of her babies after her oldest child had suffered from the disease. In both instances she demanded that they be operated upon because she was so certain of the condition and did not wish them to suffer as long as had the first baby.

There are only two other pathological processes which might be mistaken for true congenital pyloric stenosis. They are pylorospasm and congenital stricture of the duodenum. Clinically it is almost impossible to differentiate in the diagnosis between con-

genital stricture of the duodenum and closure at the pylorus without an x-ray. Practically it is unnecessary to make such a differentiation because the treatment is surgical. One needs the Fredet operation and the other of necessity a gastroenterostomy, so that one need think only of pylorospasm.

Seldom do the symptoms of pyloric stenosis appear before the fourth week, usually about the seventh. We have seen a very definite, large, well developed, hard tumor in infants one week old, in spite of the statement of a well-known surgeon with a large experience that the disease never appears early.

All of these babies have a history of having been born normal in every way, remaining so for a time and then developing the typical picture first, of spitting up, then of real vomiting, and very shortly the vomiting becoming more projectile as the muscles of the stomach increase in strength in their attempt to overcome the obstruction. At this stage if the baby is placed in a *good light* and given a bottle, the typical waves of the stomach can be seen plainly passing from left to right. The stools now change from the type of stool which is found in pylorospasm to absolute starvation stools, namely, bile and mucus. In pylorospasm some food passes at times. In well-developed pyloric stenosis the outlet of the stomach is practically closed to food.

These symptoms which show so plainly in these babies—first, vomiting, then projectile vomiting, marked waves of the stomach, starvation stools, dehydration and loss of weight—should be enough upon which to make a very definite diagnosis, but those who have an unusually well-developed touch sense in their fingers can feel the tumor under the edge of the liver. We have found this uncertain and unnecessary, and we still insist the x-ray is unnecessary and rather difficult of use in distant country places.

Guy Cochran,\* M. D. (1136 West Sixth Street, Los Angeles)—Symptoms of pyloric stenosis are so definite that its probable diagnosis is easy. The exact diagnosis is reached after a short-time observation; therefore doctors should develop the habit of thinking of pyloric stenosis in all babies from one to four months in age in whom vomiting is persistent.

Most of my patients have been healthy, breast-fed babies who when the vomiting occurs are taken off the breast and are given one or another feeding

\* Alanson Weeks (384 Post Street, San Francisco). M. D. University of Michigan. Practice limited to Surgery. Hospital connections: St. Luke's, Children's, United States Marine hospitals, and United States Veterans' Bureau, San Francisco. Publications: Congenital Pyloric Stenosis (California State Journal of Medicine, July, 1921); Glucose and Alkalies in Surgery (California State Journal of Medicine); Pyloric Stenosis (Surgical Clinics of N. A.); Bowel Obstruction Following Operations Occurring During Convalescing Period (California and Western Medicine); Large Intrascapular Hemorrhage of Liver (Surgical Clinics of North America); Congenital Pyloric Stenosis (International Clinics); An Unusual Case of Pyloric Stenosis (California and Western Medicine).

\* Guy Cochran (1136 West Sixth Street, Los Angeles). M. D. Columbia P. and S., 1900; A. B. Stanford University, 1896. Graduate study: Internship Bellevue Hospital, New York, 1900-03; European centers, 1903. Previous honors: Commander U. S. N., R. F. Present hospital connections: Chief of staff Children's Hospital, Los Angeles; head of Surgery Department, Children's Hospital; member surgical staff, Hospital Good Samaritan; chairman advisory board, Hospital Good Samaritan; chief surgeon L. A. and S. L. R. R. (Union Pacific). Practice limited to Surgery since 1910. Publications: "Congenital Hypertrophic Pyloric Stenosis in Infants," (California and West. Med., April, 1924).



until by the time I see them they are nearly moribund.

The outstanding symptoms consist of a baby who is rapidly becoming dehydrated and losing weight; vomiting becomes early projectile and persistent; peristaltic gastric wave from left to right; starvation mucus stools; frequently a palpable olive-shaped tumor at the location of the pylorus.

**J. C. Cummings, M. D.** (Coast Highway, Carpinteria, California)—We do not usually see the early cases of pyloric stenosis of infants. The doctor is usually consulted after all home remedies and suggestions of the neighbors have failed.

The differential diagnosis of pyloric stenosis in infants is not one of the simplest that we have to deal with in the treatment of youngsters between the ages of two weeks and twelve months. Every case of persistent vomiting in young infants should be carefully investigated with the possibility of stenosis of the pylorus in mind. Functional test meals of the stomach reveal high rennin, high free hydrochloric acid and high total acidity in the resting juice, delayed emptying and absence of duodenal regurgitation. Bismuth-meal examination of the stomach gives us definite information of pyloric stenosis in infants.

My observation in pyloric stenosis of infants has been that, during the first, second to fourth week, they seem to gain weight normally; then symptoms gradually appear, with projectile violent vomiting, prolonged retention of food in the stomach which can be demonstrated with the stomach tube, drying of all the tissues with arrest of normal weight, scanty urine, exaggerated visible gastric peristalsis which begins about the fourth week, may be later appearing but is not visible in the first three weeks.

Enlargement of the pylorus can be palpated in most patients, but not before the third or fourth week of life and often only later as the stenosis progresses. Secondary symptoms appear with variation as to time and duration of the trouble: emaciation, debility, dilatation of the stomach, mucus in gastric contents and feces, symptoms of acute enteritis such as flatulence, colic, diarrhea, drowsiness, and sometimes convulsions.

I feel that one of the most important points in the treatment of pyloric stenosis in infants is in the education of parents to seek early medical advice regarding violent vomiting of children.

**A. A. Bird,\* M. D.** (230 Grand Avenue, Oakland)—A gradual increase in the amount of food "spit up" by a normal, and especially breast-fed infant, during the second and third month of life should cause a thorough investigation to confirm or deny the suspicion of pyloric stenosis.

Should the vomiting become projectile, not merely rolling out of the mouth but splashing several inches

away from the face, the abdomen should be observed for evidence of visible peristalsis. Attempt first to palpate the tumor under the edge of the liver. Then with the infant placed on its back in a slanting light, with the abdomen and lower chest uncovered, give a feeding or half-bottle of water and watch for the "hourglass" contractions which will follow each other from left to right. If they are not evident in five to ten minutes, allow a time to elapse and repeat the water or observe the next feeding.

Pylorospasm may simulate stenosis very closely, but tends to regurgitation of more or less of every meal taken; while in true stenosis the stomach may retain one or two feedings, then forcibly eject the entire amount. Pylorospasm can be overcome by thick feeding with atropin, given in water before each feeding, to the point of flushing the face and body.

True stenosis when complete will not allow any food to pass, and can be overcome only by operation.

Breast milk actually so seldom disagrees with a normal infant that persistent vomiting should be the cause for a careful checking up with stenosis in mind. Valuable time should not be lost in changing from breast to bottle, or in juggling formulae, if a bottle baby, after the vomiting has reached the projectile stage and visible peristalsis is present, whether a tumor can be palpated or not.

**Mabel A. Geddes,\* M. D.** (350 E Street, Eureka, California)—There is a widespread belief among parents that a normal baby spits up a part of its feeding and that a little vomiting is merely a sign of a full stomach. It is clearly the duty of the medical profession to educate the average mother to regard with suspicion an infant who, during the first few months, habitually regurgitates or vomits a part of his feeding, especially where there is also a loss in weight.

Very often in rural or semi-rural practice one sees a mother who does not consult her physician about the new baby after she has been dismissed by him following her confinement. She depends upon some relative or neighbor to supply the advice concerning the feeding of the infant. In several of my patients the mother did not seek medical advice until the child was in a serious condition, and when the baby was beyond the hope of surgical intervention.

It is most difficult at times to make a definite diagnosis of a true stenosis, especially in those cases where the stenosis developed gradually over a period of weeks presenting a slow decrease in weight, a mild regurgitation, with occasional projectile vomiting, and recurring attacks of constipation. It is this type of case which presents a puzzling problem, and not so much the case having the clear-cut and well-defined symptoms such as projectile vomiting, dilatation of the stomach with its characteristic motile bulging, a palpable tumor in the region of the pylorus, constipation, anhydremia, diminished urinary output, and marked emaciation.

\* **Arthur Anson Bird** (230 Grand Avenue, Oakland, California). M. D. University of Kansas, 1903. Graduate study: Harvard Medical School, one year; Pediatric Department, 1919-20; New York Post-Graduate School, one month, 1920. Previous honors and services: U. S. Army, 1917-19. Hospital connections: Clinic Baby Hospital, Oakland; Public Health Center Pediatric Clinic. Scientific organizations: Alameda County Medical Society, California Medical Association, American Medical Association, California Academy of Medicine. Practice limited to Pediatrics since 1921.

\* **Mabel A. Geddes** (350 E Street, Eureka, California). M. D. University of California, 1916. B. S. University of California, 1913. Graduate study: Children's Hospital, San Francisco, 1916-17. General practice. Scientific organizations: Humboldt County Medical Society, California Medical Association, American Medical Association.

The symptoms of obstruction in the group of cases called "pylorospasm" are sometimes identical, showing all the physical signs of pyloric stenosis except the tumor mass indicating a hypertrophied pylorus. These cases usually show a prompt amelioration under appropriate thick feedings.

The treatment of pyloric stenosis naturally varies according to the condition of the child and the time which has elapsed since the onset of symptoms. If the baby is fairly strong and has not lost too much weight I attempt dietetic treatment. If the child is dehydrated I supply proper amounts of fluid such as normal saline subcutaneously or by the intraperitoneal route, because a child who is dehydrated will not be able to properly digest or assimilate his food. The next step is to try the thick feeding in small amounts every four hours, gradually increasing the feeding as the child begins to show a better tolerance for it, and the vomiting diminishes. If dietetic measures are of no avail the "Fredet" operation is the only recourse.

**J. H. Kuser,\* M. D.** (San Rafael, California)—The early diagnosis of pyloric stenosis in infants is not always easy. Vomiting or regurgitation may be due to simple pyloric spasm. But as time elapses vomiting continues; at first without effort, but soon assuming a projectile character. Sometimes one or two feedings will remain in the stomach only to be rejected at the next feeding. The characteristic wave from left to right can be seen on close observation and frequently a tumor mass can be palpated under the liver. In simple pyloric spasm, feeding with thickened gruels will give relief.

Another important factor is, that as breast feeding is the infant's natural food, its continual rejection should arouse the suspicion of any observant mother. But most cases come under medical care in the state of undernutrition, dehydrated, and having mucus stools. A diagnosis can be made without x-ray examination, and mothers ought to be instructed to seek medical advice in cases of continual vomiting with the gradual loss of weight, as a Fredet-Ramstedt operation is the only relief and it certainly has proved its value.

**Enos Paul Cook,\* M. D.** (Sainte Claire Building, San Jose, California)—Every infant who persistently and increasingly vomits is a potential case of pyloric stenosis. If observed over a period of time, this vomiting will not cease after various modifications of the formula and will be equally persistent in the breast-fed. Early gain in weight is the rule, followed by a stationary period and finally

a loss; constipation follows when less food is retained. Varying disposition behaviors have been noted from the absolutely satisfied to the constantly crying. New foods may be tolerated for a few days, but eventually it becomes evident that the baby is not retaining enough of any food to result in a gain. This is all presumptive evidence of a pyloric obstruction. Repeated watching after feeding may show the almost pathognomonic peristaltic waves, passing slowly from left to right in the upper abdomen. It will assist to have the light enter the room from a single source and at as near the level of the examining shadow which may be cast by these waves, and helps in their visualization.

Pyloric obstruction being a matter of widely varying degrees, it is evident that the more complete the obstruction is, or becomes, the more intense will be the symptoms of projectile vomiting, visible peristalsis, loss in weight, and constipation.

Conversely the presence of these symptoms in an infant justify the diagnosis of a chronic obstruction. Localizing this obstruction at the pylorus can be done most certainly by fluoroscopic examination of the infant during and following the ingestion of an opaque meal. Since, however, the only other location of an obstruction with such findings would be in the duodenum as a result of a congenital anatomical anomaly, which condition is extremely rare and amenable only to surgical treatment, it need only be done in mind as symptomatically similar.

To answer the question as to whether a pyloric obstruction is due to a true hypertrophic stenosis or is merely a spasm of the pyloric muscle, is not always easy. The intensity and persistent progression of the symptoms discussed above are certainly seen in infants who are operated upon and a stenosis found. It is my custom to rely largely upon a therapeutic test, viz., the use of small doses of atropine before meals, repeated gastric lavage, and thick cereal feedings. If with this treatment there is a sudden or even gradual cessation of vomiting, with consequent improvement in the general condition, it is presumably a case of pyloric spasm. Because after one has visualized and palpated the hard mass of a true pyloric stenosis, it is difficult to conceive of such a condition having any remissions as a result of mere change in feedings.

Information obtained by x-ray examinations has been found to be largely confirmatory. When under the fluoroscope large peristaltic waves are seen, no barium passing through the pylorus, and a four-hour plate shows a large gastric residue with little food in the small intestine, naturally it establishes the diagnosis. But the symptoms should already have done so. When the degree of obstruction varies at different times, we may visualize the stomach at a time when more or less food is passing through, so that unless several such examinations were made we might easily be misled rather than helped. It is nice to have pictures of every case, at least before deciding to operate; especially does it clarify the condition in the minds of the parents, but a very thoughtful consideration of the infant and its presenting symptoms will usually serve to predict fairly accurately the x-ray findings.

\* **J. H. Kuser** (San Rafael, California). M. D. University of Munich, 1885. Graduate study: Munich General Hospital. General practice. Hospital connections: Ross General Hospital. Previous honors and services: County physician of Marin County, 1907-22. Scientific organizations: Marin County Medical Society, California Medical Association, American Medical Association. Present appointments: Health Officer of Marin County, Attending Physician St. Vincent's, Autopsy Surgeon Marin County, Division Surgeon Northwestern Pacific Railroad.

\* **Enos Paul Cook**. M. D. University of California, 1916; B. S. University of California, 1913. Previous honors and services: Lieutenant Medical Corps, U. S. Army. Present hospital connections: Staff San Jose Hospital; O'Connor's Sanitarium; Santa Clara County Hospital. Scientific organizations: County, State and American Medical Associations. Appointments: Lieutenant Medical Corps, U. S. Naval Reserve. Practice: Limited to Pediatrics since 1920.



## EDITORIALS

### "BOOTLEG MILK"

Many citizens can look with a certain amount of equanimity upon bootleg booze, but when the criminal methods of poisoners and grafters begin to be extended to one of the world's chief food products we are liable to see a new "clean-up week."

Not long ago intelligent people were amazed to see the health authorities of Chicago held up when they attempted to stop the sale of milk from tuberculous cows in that city.

More recently the world has been stunned by the exposures of "graft" and what-not in connection with the distribution of milk in New York. Health Commissioner Harris estimates that millions of dollars "graft" money has been accepted by health officers and employees. The "World" believes: "The facts are that for the past three or four years there has been in operation in the Department of Health a shameless system of graft based on intimidation which has imperiled the lives and health of hundreds of thousands of children in the most congested tenement districts, has sapped the resistance of invalids, has spread disease and completely demoralized a branch of the dairy business most vitally affecting the public welfare, namely, the collection and sale of so-called 'loose' milk."

"An astounding feature of this scandal is that it is founded on traffic in adulterated or below-test milk. The plan to corrupt inspectors and other officials of the Health Department was conceived, launched, and operated by big milk and cheese-handling firms, working through busy agents, who deliberately set out to lower the standard of the milk supply brought into the city in forty-gallon cans, and to distribute so-called 'bootleg' cream from sources of supply not licensed by the Board of Health."

There will be grafters as long as opportunities for graft exist and as long as men will sell their souls for a mess of pottage.

It is not likely that all the grafters and crooks are in New York and Chicago, and it might be well to move the shake-up along the line. The per capita consumption of milk is increasing faster than is the per capita rate of production of this essential food commodity. This is one explanation of the general upward trend in the cost of milk—and milk products—to the consumer, and at the same time it provides additional incentive to the dishonest.

Other and even more important elements in the increasing cost of milk and the opportunities for dishonesty are inherent in the unorganized, ineffective, and complicated methods in vogue in moving milk from the cow to the consumer. It requires no unusual intelligence to appreciate the enormous savings possible under wise organization. In fact many attempts more or less local have been made to organize this great industry. Some of these have been by government, others by private corporations, and still others by combinations of these groups.

No one has heretofore conceived a plan that could withstand the adversities—social and political—which are bound to follow any forward-looking movement. And there has been no well-conceived proposal that warranted the serious attention of men with ample means and civic consciousness subscribing to it. Nevertheless there is a tangible, easily observed, general movement toward the greater centralization of the methods of handling the production and distribution of milk. The tendency has been, and now is, definitely in the direction of monopolistic control. Whether a number of great trusts or one great monopoly could handle the milk situation to the advantage of producer and consumer would depend upon the purposes and methods of such big business. Everyone realizes, none more fully than great business organizers, the utter futility of attempting to handle the world's most important food substance by the *traditional* corporation and monopolistic methods. It is not unreasonable, however, to appreciate the possibilities of sufficient central control to insure safety and service, with costs reduced by elimination of waste, overlapping, and destructive competition. The basic principles of such a movement must be better, safer service by better organization with definite provisions for the maximum of profit allowed.

Out of the scandals in New York and Chicago may grow more intelligent handling of our most important food product.

### RAISING THE LEVEL OF HEALTH KNOWLEDGE

It is logical to assume that increasing knowledge of the laws of hygiene, the causes, cures and methods of avoiding disease, would be productive of longer, happier and more useful lives. If our reasoning is sound, doctors, nurses and other large groups of citizens who have this information should reflect its value in comparative morbidity and mortality statistics. Such statistics as are available are not particularly encouraging.

The American Medical Association for years has kept careful mortality statistics among the some 150,000 physicians of the country. Examination of these records shows—with certain irrelevant exclusions—that doctors live about as long, suffer from similar complaints and die from the same general causes as do other people. Records of "periodic health examinations" of groups of doctors show about the same number and variety of defects and infirmities as are found in similar groups of citizens less well informed in matters pertaining to health.

Such evidence indicates that if doctors and others who *do* know how to live better, happier and longer fail to apply that knowledge to their own advantage and that of society, may we expect promising returns from the smattering of health information—and misinformation—now being so aggressively and expensively distributed and popularized? Many thinking physicians and other leaders in health betterment hope and try to believe that we are on the right track, but some of them are not satisfied that we are intelligently meeting the problem in the quantity, quality or methods of "health education."

"A little learning" may be a more dangerous fac-

tor in health betterment than in any other endeavor. It would be as logical to try to demonstrate Einstein's theory of relativity to individuals of average education as to make many of the intricate problems underlying health clear to the man of similar education through popular literature, slogans and clown shows. Most people who use electricity know next to nothing about it. They turn it on and off by buttons; they know a few rules of do's and don'ts and they call for expert service when in doubt.

Many doctors believe that Mr. Average Citizen's health education also should consist of a few rules about what not to do and what to do, the chief one of which is to call the "service man" when in doubt. However, the majority of people, including many doctors, are committed, at the moment, to the policy of giving all the health information—of many varieties—possible to all people from childhood to old age, with the hope that the more people know—or think they do—about how to live, the better and longer they will live. This movement has been gaining headway for half a generation with some encouraging and some discouraging consequences.

It is encouraging to believe that mankind in the mass is acquiring more health information, so that at least he has not the excuse of ignorance for not living his daily life to the best advantage.

There is no encouragement in the misinformation and propaganda that is being aggressively promoted and substituted for truth. The fact that patent medicine vendors last year reaped the largest harvest (\$275,000,000) in history; that there are many more quack healers of more kinds than ever before, is discouraging and, in the opinion of some, is a logical consequence of the little learning that may be more dangerous than ignorance. And such learning!

Examination for a brief period of "news clippings," current periodical literature, books appearing so frequently about health, and the rise and fall of uplift organizations, is not conducive to enthusiasm for the popularization of health and medical knowledge.

The more or less astute promotion of dangerous propaganda, personal puffery, dogmatic solution of controversial subjects, emotional appeal, erratic values placed upon this or that by so and so, and other useless or dangerous doctrines, is bewildering in the extreme to people who are lacking in fundamental knowledge of the needs of the body in health and disease and who are furthermore inhibited by powerful traditions, folklore and superstitions.

Herein may be seen the explanation for the conservatism of physicians in the promotion of popular medical education for which they are so frequently criticized. All of them who are worth while regret the popular ignorance of man about man. Even the selfish ones know that the more intelligent the people, the greater the call for medical services and advice. They better than others realize that grains are rare in the mountains of chaff which constitute current popular "health education," and they fail to see much hope for improvement until the chaff blows away, when the valuable seed-bearing grain can be transplanted and nurtured unto the harvest.

The three H's are as essential to intelligent health

promotion as are the proverbial three R's to general knowledge.

### HYPERIRRITABILITY OF THE VAGUS NERVE IN INTRADERMIC INJECTIONS

Certain physiological responses accompanying intracutaneous injections in clinical practice have been attributed by some to stimulation of the autonomic nervous system, especially the vagus nerves; by others, to pain. However, these postulates have not been supported by any evidence worthy of the name. Following up their previous experimental results, Luithlen and Molitor\* of the Vienna Pharmacological Institute now offer further evidence which seems to leave no doubt that intradermic injections increase the irritability of the vagus nerves when stimulated.

Using rabbits and cats, Luithlen and Molitor determined the threshold of direct electrical stimulation of the exposed vagus nerves before and after the intracutaneous injection of physiological salt solution. The index of vagus nerve stimulation was the well-known phenomenon of a fall of blood pressure. The production of an intradermic wheal always resulted in an appreciable, though variable, lowering of the threshold stimulus. That is, a weaker stimulus was required to produce the same fall of blood pressure, and also the same stimulus produced a greater fall of blood pressure. The same changes occurred in animals decerebrated in such a way as to leave the medullary centers intact, but were absent after destruction of the spinal cord, and section, or anesthetic blockage, of the sciatic nerves. Accordingly, therefore, the mechanism consisted of an increased reflex excitability of the vagi, caused apparently from pressure stimulation of the sensory endings in the skin. Irritation, or induction of pain, locally was not necessary, for the effects occurred after the injection of a nonirritant solution.

The fact that the hypersensitivity of the vagi in decerebrate animals was greater than in animals with the brain intact suggests a restraining influence of the brain on the phenomenon. It is also suggested that the vagal hypersensitivity may not be as marked under clinical conditions as under experimental conditions. Nevertheless, the occurrence of such a hypersensitivity is possible, and in specially sensitive individuals, it appears probable. Whether the results of vagal hypersensitivity could be serious cannot be said and it is quite apparent from most researches on the subject that only the vagus nerve of the parasympathetic nervous system has been considered. There is no good reason for excluding the sympathetic nervous system and stimulation of this system counteracts most of the effects of parasympathetic stimulation, so that the net result on physiological functions might be negligible. Apparently the subject needs further study.

\* Luithlen, F., and Molitor, H.: Arch. Exp. Path. Pharm., 1926, 111:246, "Pharmakologische Untersuchungen über die Wirkung intrakutaner Reize. II. Mitteilung: Die Uebererregbarkeit des Vagus als intrakutan angelöster Reflex."



## ON LIMITING DRUG ADDICTION

### A Few Efforts Well Enforced Better Than Many Prohibitions

*(Continued from Page 786, June issue)*

It is feasible to control, but impossible to effectively prohibit the consumption of narcotic drugs, alcohol or any other commodity of more or less extended usefulness, or which a substantial minority of people believe to be useful. We have been attempting to prohibit narcotics for generations, and we have not even kept them out of our most perfectly constructed and most carefully garrisoned prisons. Among "free" citizens who are watched over by thousands of tax collectors and their under-cover agents, the indulgence in drugs and other "prohibited" things and customs has increased largely because public opinion is so much exercised over the many prohibitions and the methods of bureaucratic prohibitors that the problem of the vice itself is being submerged. We are martyring a vice and its votaries.

Obviously one of the first essential steps in any intelligently conceived plan for limiting drug addiction is to draw a well-defined line between the employment of drugs by honorable, adequately educated physicians, as a constructive health measure, and their uncontrolled use for purely personal reasons. Regulations should be sharply different in purpose and method on the two sides of this line.

A national plan should concern itself chiefly with intelligent national legislation and effective law enforcement governing the importation of drugs; their manufacture; interstate distribution; the immigration of addicts and potential problem citizens; and participation in promising international movements. If these duties are effectively discharged, the more limited features of the narcotic problem and all efforts to salvage individual patients become a state problem made distinctive for each state by laws, customs, and local peculiarities in the problem.

The production of habit-forming drugs by growth, manufacture or importation is a national problem as effectively solvable as is any other national problem when approached intelligently. It is no more international than immigration. It is quite as much the business of a nation to prohibit or prescribe the rules governing admission of drugs as it is to say how many and what sort of people, peonies, or pineapples may be admitted, and under what conditions. Conversely, what is grown, manufactured, and distributed within a nation's jurisdiction also is primarily a matter for self-determination. Diplomatic efforts calculated to produce concerted action of nations in decreasing narcotics are worth while and should be encouraged, but spectacular "movements" and activities calculated to make the narcotic problem an international one are largely theoretical, premature and, as now promoted, distinctly harmful for several important reasons. Until we show that we can effectively guard the borders of our country against the illegal importation of narcotics, jewels, cabbages, and kings, we promote curious ethics by insisting that other nations, as proud as our own, help us regulate the habits of our citizens by abolishing vast enterprises which may be honorable in the minds of their hundreds of millions of citizens. During my many years of residence in the lands of the cannabis, poppy, and the coco, I have often heard leaders in the affairs of their nations insist that, if the United States would guard her borders against narcotics as effectively as she does against some other commodities, Americans would not need to insist that other nations make financial sacrifices for the welfare of (to them) foreigners. Producers of the poppy, hashish, and coco, claim, with some truth, that it is not so much the use of their crude drugs by their traditional methods that endangers their people as it is the concentrated extracts from these products and new-fangled methods of use that are shipped back to them from Europe and the United States, that is promoting a new and serious element into the vices of their people. However, when considered from the point of view of our own welfare, ballyhoo promotion of such slogans as "Narcotics a World Problem"; "Stop the Vice at Its Source"; "Control Supply by Controlling Production"—thus dispersing interest and

effort—constitutes a danger to progress in limiting a serious vice.

An element of growing importance in the production of habit-forming drugs, in our own country, is their manufacture by purifying, synthesizing, combining and "assembling" them by constantly improving scientific methods. This is both a national and state problem easily solvable by reasonable, honestly applied intelligence. For the most part the great pharmaceutical producers conduct their enterprises upon a strikingly high plane of ethics and co-operation with physicians and government in promoting good and limiting evils. However, there are too many scalawag "producers," particularly of the "assembling" species, who deal chiefly in mixtures and patent medicines and cure-alls, whom it will require enlightened and sustained public opinion, as well as fearless legislators and law-enforcement bodies, to effectively regulate.

Control of production of narcotic drugs, compounds and mixtures, is essentially a legislative and law-enforcement responsibility. Its solution requires no extraordinary intelligence, but it does require a higher order of character than is usually exemplified in matters of public welfare, of which drug addiction is but one of many. It is perhaps less honestly handled than other public problems—except control (?) of the use of alcohols—because of the incomparable profits available both to government and to narcotic bootleggers, and because of a certain type of political power inherent in the situation.

The difficulties in controlling production are somewhat increased by the large and increasing usefulness of narcotics in the relief of suffering and in the treatment of diseases of man and animals. This fact must be recognized and provided for as well as the storage of huge quantities of these drugs against possible national emergencies of such a nature as to interfere with their importation.

National and interstate transportation and distribution of narcotics are matters to be handled under national laws and regulations by agents of the federal government. Control of distribution within a state ought to be exclusively a problem of the individual state. The sharing of this responsibility by federal and state governments, now in vogue, furnishes too many opportunities for "buck passing," and provides too many loopholes through which criminals and traffickers in narcotics easily escape. Every wholesale house, pharmacy, hospital, clinic, health center, institution or other depository or distributor of narcotics should be legalized, licensed, and controlled exclusively by the state. The laws should provide adequate, unequivocal penalties; licenses should be granted only under strict requirements, including ample bonds and suitable provisions for revocation; and all matters of administrative supervision should be definitely a duty of the licensing body who should have ample legal authority with sufficient discretionary power to make prompt, intelligent action under all conditions possible. Licensing and control over distributors of narcotics should be extended to apply to all preparations containing in any quantity habit-forming drugs of whatever character.

Laws and law enforcement pertaining to illegal distribution should be strengthened. Peddling, bootlegging, or any other form of illegal trafficking or possession should be a penal offense punishable by mandatory prison sentences. These criminals are the most depraved and lowest of any known, and the doctor who prostitutes his profession by the unwarranted use of narcotics is the lowest of them. Their punishments should give them long periods of enforced harmlessness whenever they are found guilty. This is not being generally done, and so long as the judges and attachés of some of our courts are the political creatures they are, it won't be done. Laws governing the licensure and supervision of physicians who are authorized to prescribe and use narcotics, are sadly in need of extensive revision. Regulation of those licensed to treat the sick should be taken out of the hands of tax collectors and be placed exclusively in the hands of the body charged with the responsibility of licensing physicians and disciplining them when necessary. Leaders of thought in foreign countries that we blame for producing narcotics say that they would be more convinced of our altruistic purposes if our country

treated the situation more as a human welfare problem and less as the huge money-making one it now is. Our laws and regulations are designed and enforced to produce income, which they do to an extent which places our government in the disgraceful position of a trafficker in narcotics for revenue. In a word, our methods are strong for profits, but are weak in laws and regulations calculated to improve health and welfare.

More intelligent care of unstable citizens of many varieties, from whom addicts are largely recruited, would help materially in limiting the narcotic evil. This problem is too extensive and involved to discuss here, further than to say that to many problem citizens narcotics are a welcome alternative to our standardized methods of mis-handling them.

We often start potential addicts early in life to looking for some "way out" by promoting what the children themselves call "nut classes" in our public schools, by which we set our problem children aside and brand them. We keep this segregating line taut throughout life in practically everything we do for them. Experience with other biologic problems has taught us to recognize segregation as a last resort measure, and not one of election, to be promoted and acclaimed. It is certain that we are not now successfully handling our problem citizens of any age, and that by our failures we are providing the (to them) sufficient excuse to follow some other trail, of which "poppy dreams" is one.

"Education" has come to be hailed as the fashionable preventive panacea for most of the failings and infirmities of mankind, often overlooking the plain facts that a surprising percentage of those engaged in practices condemned by society are among the so-called educated classes. There is a growing doubt in the minds of students of the narcotic situation of the efficacy of "education" as a preventive. There are no convincing statistics, but such as are available do not indicate that the type of education we are giving our young people has much, if any, influence in limiting addiction. It is not difficult to place quite a different interpretation upon such data as are available. Certainly all people of all ages should be kept warned of the dangers and consequences of narcotic indulgence, but that a more complete knowledge of the drugs and their actions will decrease the number who seek the temporary comfort these drugs offer, is open to serious doubt. The committee of the American Medical Association now engaged in a study of the narcotic situation should give this question serious attention before the physicians of the United States commit themselves as to the quality and amount of education necessary to be most effective against the narcotic evil.

Better control of the sale of what may be termed appetizers would be materially helpful in limiting drug addiction. Appetizers include any and all preparations that contain habit-forming drugs in any amount as well as many preparations calculated to relieve pain, produce sleep or induce comfort. That habitual use of these appetizers is an important first step toward more serious drug addiction is supported by convincing evidence. The ideal solution of this situation may be frankly admitted to be impossible of accomplishment in either a national or state plan, for reasons that need not be further elaborated. Consequently each state, in laying plans for improvement in its narcotic situation, should aim as high as practicable and fight for all it can get.

Alleged "cures," not only for drug addiction but for other infirmities, are important contributing factors to drug addiction. It is a duty of the state to limit all "cures" and "hopeful treatments" to those having ample scientific endorsement. To do this does not require more knowledge, but it does require adequate legislation and more character among law-enforcing agents.

To offer hope of permanent betterment every plan must recognize that narcotics are essential, and that it is their abuse and not their prohibition that should concern society. We would move forward faster by recognizing the reactions of various personalities to drugs. There are probably more people in the world who habitually use narcotics without apparent material damage than there are citizens in the United States. Vast concourses of people in certain countries use their drugs very much as other nationals do their alcohol and tobacco, as food substitutes and strengthening sedatives throughout

their lives, without indulging in excesses. Whatever one may believe about the consequences of their customs to such people, we will all admit that, for the majority of our citizens, such practices would be calamitous.

(End)

### THE HEALTH DOSSIER

*Every man, woman and child in every community should have his health recorded in the files of his family physician.*—WENDELL C. PHILLIPS.

Every true physician echoes this sentiment in his heart, but what are we doing about it? Very little.

The average citizen is brought into the world by one doctor, or some incompetent midwife, cared for through infancy by another doctor, clinic, health center, or likely several of them plus a few specialists.

During school years the child is "educated," examined, inspected, diagnosed and prescribed for by a flock of teachers, nurses, school clinics, health centers, magazines, Sunday supplements, uplift organizations and what not conducted in large measure by the inadequately educated and not infrequently by anti-medicalists. If the youngster goes to college he is picked up as something new by other groups of doctors, hygienists, psychologists, social workers and what not, each again starting another health dossier.

If the adolescent does not go to college, he goes from one health adviser to another and on through life without ever having his health assays brought together in such a manner as to be most useful.

It is not an infrequent experience of doctors to have an adult patient say to them that their greatest regret at having had measles, diphtheria, or what not, was their having to repeat the story so many times to so many people.

Of course it is not feasible, but what a help it would be to patients and doctors if every individual could have a written health dossier started at birth and kept up to date by additions made by all who participate in shaping his health. There are some such records and they constitute diaries that tell much to the patient and more to each doctor who serves the individual.

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**Ever-growing demands on the service of physicians for charity work** are unfair to the profession economically. It takes seven to ten years and \$10,000 of somebody's money to educate the doctor for his life work. Then his domain is continually encroached on by quacks and fakirs on one hand, and by "untrained professional uplifters" on the other. The latter insist on his giving his services for nothing to people who don't need such help, and who would be a lot better off morally and spiritually without it.—L. L. Bigelow, *International Journal of Surgery*.

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It is a fairly recognized fact that diseases of old age require as much special attention as do diseases of childhood. The senile organism has peculiarities which demand treatment different from that used in treating diseases at maturity. More and more it has been recognized that geriatrics (diseases of old age) has a special place in medicine, and we note that medical journals throughout the world are giving attention to this particular study.—Malford W. Thewlis, M. D. (*M. R. of Rev.*).

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The civilization of a country consists in the quality of life that is lived there, and this quality shows plainest in the things that people choose to talk about when they talk together, and in the way they choose to talk about them.—A. J. Nock, *Harpers' Magazine*.



## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

Those physicians, if there are any such, who have endorsed the Sheppard-Towner Act will find much of interest in W. C. Woodward's analysis of this paternalistic fad in the Amer. Med. Assn. Bull., May, 1926.

The country physician can handle 80 or 90 per cent of his practice with self-respect; his city brother can do no more. And as for the intellectual barrenness of country practice, the resourcefulness that it calls for, the responsibilities that it demands, the problems that must be tackled, furnish to an intelligent man a sort of stimulation that is satisfying and that brings out the best that there is in him.—William Allen Pusey, *Journal A. M. A.*, May 15, 1926.

A birth control specialist from Boston recently told the Commonwealth Club that the majority of doctors endorsed his propaganda!

It is probably true that some doctors are helping birth controllers make "motherhood voluntary and discriminate."

Does not the accuracy of the crusader's statement that the "installation cost" of a baby was between \$200 and \$300, depend upon what he means by "installation"?

Last year the news wires carried the story around the world that a million of these little innocents were "installed" in the bottom of a river in one country.

Physicians who are interested in industrial medicine and persons who help insurance companies—state and private—pay the costs of care of their beneficiaries by contributing to the support of hospitals that render these services at less than cost will find much to meditate over in an article by Editor Rector, *Nation's Health*, May, 1926, page 317.

CALIFORNIA AND WESTERN MEDICINE frequently has called attention to this peculiar form of "charity," (?) which is widely prevalent in California.

**Exhibitors at C. M. A. Sessions**—The C. M. A. has for some years carried out a policy of permitting only those who advertise in CALIFORNIA AND WESTERN MEDICINE to exhibit at the annual sessions of the Association. This policy is very popular with advertisers, who rightly interpret it as a worthwhile return for their support of the Association and its publication.

It is helpful to doctors because they meet at every booth representatives of ethical dealers whose products and methods have been carefully looked into and accepted by their own organization.

Visitors gain helpful ideas of the materials and methods endorsed by a great medical organization, some of which lead to practical results of value to the public health and to legitimate business interests.

Under this policy the exhibits at the 1926 session were particularly attractive, educational, and useful. The exhibitors felt at home with those whose patronage they invite, and the spirit about the exhibits was friendly and mutually helpful.

Advertisers who took advantage of this privilege were:

Alexander Sanitarium (occupational therapy work of patients); Bischoff's Surgical House; Calso Water Company; Certified Laboratory Products; Cutter Laboratory; Robert A. Fischer; Hanovia Chemical and Manufacturing Company; C. H. Hittenberger Company; Horlick's Malted Milk Corporation; Laboratory Products Company; Medical Protective Company; Mellin's Food Company; Merrell-Soule Company; Napa Rock Mineral Water Company; Physio-Therapy Manufacturing Company; R. L. Scherer and Company; Shasta Water

Company; Spindler & Sapppe for E. Leitz; and Travers Surgical Company.

This policy of permitting advertisers only to exhibit at C. M. A. sessions will be continued, and under it exhibits at the 1927 session at the Los Angeles Biltmore should be even more successful than heretofore.

Preparations for the 1927 session are already under way, and advertiser-exhibitors may make their arrangements as to space and other details with Dr. William Duffield, Auditorium Building, Los Angeles.

God bless Uncle Joe Cannon, who so far has avoided the pitfalls of many other near centenarians by not telling the world how to live long. Why is it that highly respected citizens whose ears ring with the deserved plaudits of mankind for outstanding service in some phase of industry get slobbery about health as they reach the age of senescence?

The Opticians' League of New York announce in advertisements that they are organized "to support constructively the dispensing policy and ethical purposes of the oculist."

Henry Ford gets front page black type for saying that doctors are "beginning to find out that disease springs from food." Sic!

"Every patient is a private patient." "A patient is a patient, not an exhibit." "Self-respect forms a part of a patient's health." This and more sayeth Henry Ford. Platitudes, yes. Old stuff, yes; but maybe it will help to have them again as the first-page stories they now are.

We continue to civilize primitive peoples. The Charleston is replacing the hulahula in Hawaii.—Pittsburgh Chronicle Telegraph.

The word "participation" more exactly expresses the physician's point of view of harmony of action among the trinity of workers in public health. It comes from two Latin terms, *pars*—part, and *capere*—to take; therefore, to take part. Physicians are ready to take their part in any phase of public health work. Their peculiar field is technical work for which they alone are qualified, both legally and scientifically. Their relation to other groups in anti-tuberculosis movements, anti-diphtheria campaigns, and similar activities is expressed by the word "participation" more happily than by the word "co-operation."—*New York State Med. Journ.*, May 1, 1926.

Grandma Pash says there's too much tomfoolery mixed up in th' raisin' o' children nowadays. She ought t' know; she's lost eleven.—Abe Martin.

During the last few years a great deal has been written for the general public about the value of health and how to keep well. Such information is not confined to special health publications, but is quite general in the daily press. There is hardly a big newspaper today that does not have its health editor and health column, in which it undertakes to give more or less information to its readers on how to avoid illness, or what to do to regain strength and well-being.—*The Nation's Health*, May 15, 1926.

**About Books**—Among the many pleasures of growing old in medicine are the privileges and opportunities to reflect and meditate over one's trials, tribulations, mistakes and successes encountered in grim battles on the

outposts of health which make up a large part of every physician's life.

When one who has these privileges takes the opportunity to enrich his meditations and dreams, if you please, by perusing the biographies of great physicians, the autumn of life may be made happy indeed. But such reading is liable to emphasize regrets that strenuous student days and the necessity of making a livelihood prevented one's acquiring the valuable information stored away in the annals of medical history at a time of life when its usefulness might have been applied.

Exceedingly well-written biographies of physicians are being put out in considerable numbers. We have called special attention to some of them, as, for example, "The Gold-Headed Cane." "Pediatrics of the Past" by John Ruhräh (Paul Hoeber, Inc.), is a particularly fascinating story that should be read by every physician and particularly those who include children among their patients. H. L. Mencken in reviewing this book for the Baltimore "Evening Sun" says of it: "What could be more unpromising that the subject matter of this tall and stately book; the dreadful bellyaches of infants in arms, their forbidding spasms and bellowings, their gruesome and often losing struggles with worms, the occult mysteries of their feeding? Yet Doctor Ruhräh somehow manages to make it fascinating, and even charming. Himself an active practitioner upon the young, he has interested himself for years in the ideas and doings of his predecessors in that art, especially those of centuries ago, and here he gathers together some of the fruits of his long inquiry, with illuminating and often sardonic comments. There are extracts from the primeval pediatricians, sometimes long ones, and there are historical and professional notes upon their lives and times. It is a curiously interesting book, and there is a lot of strange stuff in it."

Dr. Fielding H. Garrison has given us another charming, delightful, useful little book, "The Principles of Anatomic Illustrations Before Vesalius" (Paul B. Hoeber, Inc.). If medical students were made familiar with this illustrated inquiry into the rationale of artistic anatomy early in their careers, how much more appealing that "dry subject" of medicine would become! Even the physician who graduated years ago will forget some of the one-time disagreeable features connected with the study of anatomy in the perusal of this story, and all but the unusually wise will also learn something.

**Parasitic Protozoa of Man.** By Charles F. Craig. Lip-pincott, 1926.

With his experiences and the facilities at his command, Craig should have written a more useful book on this important subject. There is much to commend in it, and its careful perusal should be helpful to physicians who do not find time to follow the voluminous discussions that make up the literature of diseases caused by protozoa. In more than one place the author handles the published conclusions of other workers as the Georgia woman accused General Sherman of handling fire—carelessly. Nonmedically educated protozoologists who during recent years have made such valiant attempts to make a disease—amebiasis, for example—fit their conception of what a parasite should do, rather than the other way around, will gain much needed comfort from the opinions of the distinguished author of this book.

Some reviewers have used their literary lancets rather vigorously on Voronoff's book, "Rejuvenation by Grafting." To hold his book up alongside the acres of newspaper space this man has had, does make a rather pathetic picture. Newspaper notoriety has finished many another shadow boxer, but still they come.

Van Buren Thorne (New York Times) in his review of Voronoff's book justly excoriates the author for accepting credit for discoveries already made and largely discarded by an American surgeon years before Voronoff caught the fancy of newspaper reporters.

Voronoff did not even mention Frank Lydston in his

earlier book "Life," and in his latest book he only mentions Lydston casually, and misspells his name at that.

**My Wet Creed: I am an abstainer.** I am an abstainer now and I was an abstainer before the Volstead Act was passed. But there are some things I deny the right of the government to govern me. I deny the government the right to say whom I shall marry. I deny it the right to say how many children I shall have. And I deny it the right to come to my dinner table, invading my house, and say what I shall drink or what I shall eat. Otherwise I would be a fool or a slave.—Capt. William H. Stayton, formerly president of the Navy League of America.

It is said that 150,000 boys will graduate from American high schools this summer. They will have 300,000 hands not one of which will grip a plow-handle, an ax helve, or an engine throttle.—Houston Post-Dispatch.

The death the other day of Martin A. Delaney, physical director of the Chicago Athletic Club, after a short sprint for a street-car, renews attention to the peril known as the athletic heart. Mr. Delaney was 55. William Blaikie, who lectured on "How to Get Strong," and Walter Camp, teacher of correct living, also passed away suddenly at what should have been the very prime of life. Not how to get strong, but how to be normal, temperate in physical habit and careful, is the lesson most of us need to learn. There is danger in overdoing.—San Francisco Examiner.

Thus again we see sound conclusions slowly catching up with a foolish fad.

Whatever other reactions one may get from reading Isa Glenn's "Heat" (Knopf) the injustice of her implications and conclusions must take first place in the minds of those long resident in the Pearl of the Orient.

There were, and are, characters in Manila as weak and vicious as any Miss Glenn describes, but to intimate that they are representative of either Americans or Filipinos is simply atrocious. "Going native" should not be limited to Manila. Many of that type who never leave home shores "go native" quite effectively.

This author's estimate of Filipino character is so little representative and her poisoned darts are so clumsily thrown as to suggest to those experienced in tropical matters—physicians in particular—a source of "Heat" not contemplated by the author.

The one important message in the book is a socio-health one, but it is so obscured as to be unutilizable except to the initiated, and they don't need it. It is unfortunate that reviewers like Mencken and others see in "Heat" an unexaggerated story of the lives of Americans in the Philippines.

The Sixth Edition of "Diagnostic Standards" in tuberculosis is issued by the National Tuberculosis Association. Physicians who like their information in tabloid form; who do not keep up with medical progress; or who need a brief reminder of fundamental points in the diagnosis of this important disease may find this little pamphlet useful. Copies may be had by addressing the state or national tuberculosis association.

Even busy doctors may find time to read "Charcot Centennial Anniversary" number of the Bulletin of the New York Academy of Medicine.

The one hundredth anniversary of the birth (November 25, 1825) of this "greatest physician of the nineteenth century" has been made the occasion around the world for a review of his influence on medicine.

"To read the countless tributes from all lands following his death and during the present year," says F. H. Garrison, "is to realize that Charcot was not only the greatest physician of France, but, in relation to his period, of the whole world."



## MEDICAL ECONOMICS AND PUBLIC HEALTH

All licensed physicians and surgeons of the city of Los Angeles have been made deputy public health officers for the purpose of readmission to schools of pupils suffering from nonquarantinable contagious diseases. A small step, but one in the right direction.

In at least one country every licensed doctor of medicine is a deputy public health officer which, according to the report of an investigator of the Rockefeller Foundation, explains the leadership of that country in health progress.

If a license to practice medicine and surgery automatically carried with it appointment as a deputy public health officer of the state, county and municipality in which the physician practiced, with the legal duties and responsibility of such position, might it not lead to better public health service, personal health service and insure co-ordinated action between groups of doctors now too often not manifest?

**"MORE DISGRACEFUL THAN UNFORTUNATE."** Under this headline the New York Times says:

"No community has a right to have more than a few imported cases of typhoid fever or smallpox, and particularly is it disgraceful for any town pretending to be civilized to have smallpox prevalent. Yet there has been not a little of it in Florida this winter, and a good deal more in California, and further north on the Pacific Coast.

"In Florida the victims have been chiefly negroes, and they, in some parts of the South, do present a difficult problem. For California, Oregon, and Washington, however, to have allowed an unvaccinated generation to grow up proves both original neglect by the health authorities and their failure to take the epidemic vigorously in hand as soon as the first cases appeared.

"They are satisfactorily active now, and are vaccinating people by the thousands, with the natural result that the affliction is dying out. That it was allowed to go so far indicates either the presence in considerable numbers of the strange people who deny the efficacy of vaccination or assert its harmfulness, or else the making of the always disastrous mistake of concealing a contagious disease for what are imagined to be business reasons."

Statements like this and others to the same end now being widely published ought to interest California Chambers of Commerce quite as much as it does physicians.

Much of the expensive advertising for tourists and new residents for this vast state is counterbalanced by our stupid handling of health problems.

What is the result of the school health program as it exists today? Students in the upper grades and even on admission to college show as bad a condition of physical unfitness as students in the lower grades. Improvement in health habits have not kept pace with the complexities of living, so that there has been practically no improvement in the health habits of children during the past fifty years. Nor can improvement be brought about by simply training the intellect or securing a temporary change of health habits by rewards, or by inducing children to follow a fixed number of health rules on the false assurance that by so doing they can become well and strong.

No program to achieve physical fitness is complete unless it is safeguarded against the tendency, on one hand, to assume that because some particular method brings results in certain instances it offers a panacea for all the ills involved and, on the other hand, a readiness to use some blanket method—or, to change the figure, to load the gun with a charge which includes all known remedies and means of improvement.—William R. P. Emerson, Amer. Journ. Med. Sci.

One of the general sessions of the American Public Health Association held last October was devoted to discussion of the question, "Shall health officers be licensed?" W. A. Evans of Chicago in opening the discussion said that Illinois has "more than 2000 health officers who have had no sort of academic training for the positions they occupy. They are farmers, merchants, hack drivers, undertakers—everything except trained health officers.

Similar conditions, though in different degree, are found in most of the states."

Evans proposed to remedy this situation by "the organization of a public health profession, with the spirit of a profession and making use of the same kind of licensing power as has been employed with other professions."

This suggestion to create a new profession independent of the profession of medicine brought this encouraging message from J. C. Geiger. "I do not think you can make a public health administrator either through the medium of a college or through the medium of a license. Some of the professors of public health administration I have known have never handled a health department.

"The question of licensing doctors with public health training or experience as public health administrators would appear to be a somewhat unnecessary procedure, as doctors are already licensed. Some physicians who have moved from state to state have several licenses. Likewise nurses are licensed. Who else are you going to license? Perhaps the sanitary engineers. . . . Licensing a public health official will not make an administrative officer and neither will the best of education make administrative officers. Unfortunately the best administrative officers are born and not made, and it is only experience that makes some of us "practical" administrative officers."

John Sundwall added: "Licensing of public health workers and administrators at present will prove to be a complicated and difficult process. In fact I am not at all clear as to how this can be done. . . . I believe we are all agreed that it is highly desirable for the public health administrator to be trained in medicine as preliminary to his training in public health. This is especially desirable for the health office of small communities where he must perform many functions."

Concerning the latest proposal of the bureaucratic urge, Senator Edwards the other day said: "Little by little the National Government has been encroaching upon state rights. It is time to call a halt, and defeat of the Curtis-Reed Bill is a good beginning. All students, regardless of their intelligence or ability, should not be compelled to lockstep behind a federal educational autocrat who could not possibly be in a position to appreciate highly individualized and specialized demands of forty-eight different states."

The country needs more democracy and less bureaucracy.—Ohio State Med. Journ., May, 1926.

An Illinois optometrist publicly announces that brown eyes are better than blue ones because they last longer. There is absolutely no evidence to prove this statement. The optometrists very glibly pass out to the public a good many opinions concerning eyes and their care that are worthless, and some of the advice is positively detrimental to the best interest of the public. However, this is one way to get the ear of the public, and it is propaganda that leads many school boards to appoint opticians, jewelers or plain spectacle peddlers to examine the eyes of school children. Verily the medical profession has been asleep or it would have made a strenuous effort to offset a good deal of the vicious teaching of medical pretenders.—Journ. Indiana M. A., May 15, 1926.

Judged from the number of marked clippings we have received, doctors must have gotten quite a "kick" out of the attack on "calories" made recently through the public press by a "nutrition expert," if you know what we mean.

"Five out of every six persons who claim any knowledge of nutrition are undernourishing themselves by counting calories" believes this expert, who also advises "for your own salvation stop counting calories."

The practitioner of any specialty in medicine would almost invariably be a better specialist had he served a few years' apprenticeship at general practice. Too often he has associated himself with his specialty at once on completing his hospital internship and, therefore, while an adept in his own field, he is apt, with his narrow experience, to fail sadly in grasping some of the broader problems of the cases upon which he is called in to give advice.—Med. Soc. New Jersey, April, 1926.

**Compulsory Health Insurance in England**—Although compulsory health insurance has been in force for more than fifteen million of the population of England since July, 1912, the subject is still as bitterly controversial in that country as it was when it was started nearly fourteen years ago. A royal commission of thirteen members appointed in 1924 to study the whole question has recently made its report; reports, rather, because there is a majority report signed by seven members, by two other members with certain "reservations," and a minority report signed by four members.

Langley Porter has supplied us with clippings from the "London Times" from which the facts here presented have been taken. Apparently the only thing the Commission were unanimous in was that "insurance committees" should be abolished and their duties transferred to the "local authorities." The majority report states: "The members have no reason to think that there now exists any considerable body of opinion adverse to the principle of National Health Insurance. In contrast to the paucity of evidence directed against the general principles of the present scheme, a large volume of evidence in its favor was received from many different quarters, and this testified to the advantages in health and social security which had been derived under it." Nevertheless they recommend 122 changes in the law and its administration. One of these recommendations is for an extension of the law to cover several millions now exempt from its compulsory features.

Regarding medical care the majority report says:

"While it has been inevitable hitherto that medical benefit should be confined to a general practitioner service, this limitation has detracted from the value of the benefit and its removal is urgently desirable.

"The additional benefits of a treatment character have been, on the whole, successful and appreciated, though in varying degree, but they suffer from the following defects inherent in the conditions under which they are provided:

"(a) They are only available for those insured persons who are members of societies having surpluses at valuation, and only for those members who fulfil certain qualifying conditions, and consequently large classes of insured persons are debarred from participating in these valuable services.

"(b) Even among the societies giving a particular type of treatment benefit there is no uniformity in the content of the benefit, with the result that there is widespread confusion in the minds of the insured persons as to what precisely their rights are.

"(c) The arrangements made between societies and professional bodies are wanting in authority and uniformity, and in some cases are accompanied by undesirable conditions."

It is recommended that as soon as funds are available the scope of maternity benefit should be expanded to cover medical and midwifery services in addition to a cash payment; that the service element should then be administered by the local health authorities and be co-ordinated with the other local medical services, and that a cash element should be retained and be administered in connection with other cash benefits.

The extensions of statutory benefits to be made as and when funds are available to meet the cost should, the majority report suggests, be placed in the following order of priority:

(a) Extension of the scope of medical benefit.

(b) The provision of allowances in respect of dependents of insured persons in receipt of sickness or disablement benefit.

(c) Improved provision at the time of pregnancy and childbirth for insured women and the wives of insured men.

(d) The provision of dental treatment as a normal benefit.

The extension of the scope of medical benefit should take the form of the provision of:

(a) Expert medical advice and treatment for persons who can travel to meet the specialist.

(b) Expert advice for persons who are unable to travel.

(c) Laboratory services.

In-patient treatment in hospitals, major operations in

the home, maternity services and dental service should not be included at present.

Other recommendations contained in the majority report include:

"Provision in the scheme should be made for the closest co-operation between the general practitioners and the specialists, particularly for the exchange of information as to cases and for the giving of definite guidance to the general practitioner as to both diagnosis and treatment. Any practitioner possessing the requisite qualifications should be entitled to take part in the work, and the decision as to whether particular practitioners possess these qualifications should lie in the hands of a mixed lay and medical committee for each area."

"With regard to the remuneration and control of insurance practitioners, it is suggested that the capitation method of remuneration be continued as the normal method, but that the attendance method be retained as an alternative for adoption in particular areas when so desired."

The "reservations" of particular significance to physicians that two members made in signing the majority report are expressed thus:

"The problem, which should not be impracticable of solution, is to devise a method whereby society, while guaranteeing to every individual the opportunity of a reasonably complete life, shall yet be able to protect itself against the infusion of elements calculated to be a source of weakness. So far from the conjoint attainment of these two ends being impracticable, it may be suggested that the first and more visionary is possible of achievement only on condition that the second and less popular is in some measure realized."

The majority report calls attention to the inadequacy of preventive medicine service. They believe:

"That it is neither necessary nor proper to confine the developments of the National Health Insurance Scheme to such as can be paid for within the present financial resources of the scheme; that the local administration of additional benefits could be more satisfactorily carried out by the local authorities responsible for other health services than by approved societies; that the failure hitherto to give effect to the provisions of Section 107 of the Act as to inquiries into excessive sickness has been largely due to the fact that the approved society system is not adapted to the purpose; and that the system is a hindrance to the development of a complete public health policy."

They maintain "that there is no financial loss due to the overlapping of the various health services at present in operation, and that the money available will be increased when these services are unified and controlled under the local authority; that as the provision of a complete medical and treatment service would tend to prevent sickness and to effect a speedier and more complete cure of illness, it would result in economy." In a long editorial discussion of the report the "Times" says: "This is clearly not the moment to add to the almost crippling burden of the social services on industry, with its inevitable reaction on the available amount of employment in the country, and consequently on the health and happiness of the insured. The extent of that burden is clearly shown in the Commission's report. The United Kingdom stands already far above all other countries which are its trade competitors in the sum total which it provides for purposes of social relief and assistance. The cost of Poor Law, Workmen's Compensation, Old Age Pensions, Health Insurance, and Unemployment Insurance is 78s. 6d. per head of the total population, or more than twice what it is in Germany, and respectively six and twenty-five times what it is in France and Italy. The present appropriation for National Health Insurance is £39,000,000 a year, for the Contributory Pensions Scheme £26,000,000, and for Unemployment Insurance about £50,000,000—a total of £115,000,000, of which the state finds £24,000,000. If to this is added the cost of public education, expenditure under the Public Health Acts, noncontributory Old Age Pensions, Housing of the Working Classes, Poor Law Relief, and the Workmen's Compensation Act, the annual charge for social services which the country is meeting amounts to more than £300,000,000."

The editorial closes with this significant statement: "It



certainly seems reasonable to assume that an economy of expenditure and of effort might be effected by surveying the problem of social insurance *as a whole* instead of sectionally. On the question of health reform as standing by itself, it is well said in the reservation that there are grounds for believing that expenditure on health, unless primarily directed to the removal of the causes of ill health, may tend to occasion a further increase in such expenditure. It is the business of the state to care for the health of the community, and the duty of the medical profession to regard the health and recovery of the individual patient as the supreme consideration. But it is true that 'postponement of the event of death' may mean, and in many cases must mean, an increase in the number of cases requiring medical attention, that the prevention of ill health is even more important than its cure, and that for the establishment of a healthy community the sanitary side may be more efficacious than the medical side of medical science."

Present schemes of health "chores," "teaching health," and so forth, are ill adapted to real needs and misleading in the impressions they actually make upon children. Intellectual knowledge has little or no permanent effects on health habits.

The work of the school physician usually amounts to a mere "screening" out of a certain number of "deviations from the normal" without getting at causes or removing them.

"Blanket," "shotgun" and panacea methods lead to waste of time, energy and funds much needed for constructive health work which takes account of actual causes and individual needs.—William R. P. Emerson, Am. J. M. Sc.

Another valuable agency was enlisted in the never-ending search for the cause and a cure for the common cold, one of the greatest scourges of humanity, when Francis P. Garvan, president of the Chemical Foundation, offered to finance the undertaking by the American Drug Manufacturers' Association.

Reporting good progress in the fight to establish the chemical industry in this country in competition with Germany in the fields which Germany formerly controlled, Mr. Garvan branched into the subject of the common cold, which he said was one of the greatest causes of mortality and economic loss, in spite of the fact that it is usually regarded as of slight importance. He said:

"Sitting at my desk, it seems to me as if a new industry was born in this country every minute, fathered by chemistry and mothered by research. But recently, in my pride and boasting of our achievements, the curtain lifted over something undone, a problem I have brought to you and which has, I might almost say, overwhelmed me in its importance and in the little that has been done with it. This is the subject of the common cold.

"When you come to consider that all through our lives we go on suffering from a cold and pneumonia, from mastoiditis and the sinus troubles, and a thousand and one things which develop out of the common cold, to say nothing of the inherent weakening of the physical structure by these repeated assaults upon ourselves, but more particularly upon our children and our women, you realize the gravity of the common cold.

"Do you realize that ten days of every man's, woman's, and child's activity a year, on the average, are lost throughout this country? It amounts to more than a million years of activity annually. The loss to agriculture, industry and all business activities is some 700,000 years of working time through the incapacitation of 15,000,000 workers in this country."

The American Drug Manufacturers' Association voted to co-operate with the Chemical Foundation in seeking a method to check the ravages of colds.

Only one person in six bitten by a rabid animal will develop "hydrophobia," but once the symptoms appear the mortality is 100 per cent. It is impossible to determine which one of the six is going to develop the disease; therefore it is the part of wisdom to start anti-rabic treatment as early as possible, as the malady may come on as early as fourteen days after infection or as late as fourteen months afterward.—Ohio Health News.

The striking conquests of preventive medicine in the fields of smallpox, typhoid fever, and the diseases due to animal parasites tend to breed a false confidence and we are tempted to rest on our laurels, proudly recounting our glorious achievements. While we can speak of concrete accomplishments in the control of diphtheria or the eradication of hookworm disease, we are content to prate vaguely of "hygienic living" and low protein intake for the prevention of arteriosclerosis, nephritis, arthritis, or hypertension.—Boston M. and S. J., April 22, 1926.

The output of scientific books and articles is enormous. It has been estimated that there are today in the field of medicine alone 1500 journals which print about 100,000 papers annually. The "Index Medicus" with its 1000 pages reports about 40,000 articles each year. The Surgeon-General's library in Washington has catalogued since 1880, 1,400,000 articles and 330,000 book titles. The task of sifting, listing, indexing, and in many cases making brief abstracts of scientific articles has become almost overwhelming. It is reported that 129 bibliographical reviews and 153 serial publications print abstracts or summaries.—Annual Report, Rockefeller Foundation.

The wholesale resignation of the members of the department of dermatology of the Vanderbilt clinic and the College of Physicians and Surgeons of Columbia University, etc., etc., as a protest against the appointment of a "laboratory man" head of the department has caused widespread comment among physicians and wide publicity in the daily press.

Several of our readers have furnished clippings and invited comment. The kernel of the situation is a fault inherent in *mergers* whether of canners or clinics, hotels or hospitals. Mergers destroy individuality and call for more or less arbitrary dictatorship. When they grow too large and prosperous they crush themselves. The fracas in question is only a pin prick to the ruthlessness that must prevail if the supermerger of medical educational and medical practice corporations now being built around Columbia is to endure, even until the next innovation is popularized.

Brown University announces that hereafter undergraduates will be examined not only as to their lungs, hearts, livers, and eyes by physicians, but also as to their worries, doubts, despairs, loves, and hates by trained psychologists.

In announcing this ancient pedagogical canon, *mens sana in corpore sano*, President W. H. P. Faunce stated that the assumption of this responsibility by "the best men in the medical profession" was expected to save unbalanced Brown students from the tender mercies of the psychologist, from whose diagnoses amateur introspectors have been known to derive harmful results, trying to "live up to their characteristics."

Insistence on the purchasable character of public health has at best one obvious danger. It may give the impression that only ample funds are needed, when in reality the methods employed and the personnel in charge are a more important consideration.—Nation's Health, April 15, 1926.

The Kings County Medical Society, Brooklyn, New York, now in the 104th year of its existence, has decided to break a precedent by allowing laymen to become associate members. They will be permitted to attend and take part in all the regular meetings and discussions of the organization, but will have no voice in the administration.—Archives of Therapeutics, May, 1926.

Doctors, when during your office hours, or in your few spare moments of leisure, the subject of quackery turns up, what have you to say on it? Do you fume and sputter, or do you elucidate? Do you call the chiropractor names, or do you show up the fallacy of his claims? Are you informed on the theories of osteopathy, homeopathy, naturopathy, chiropractic, Abrams electronics, etc., etc.? Have you enough facts to convince your patients and to instruct your hearers? If not, you are missing a precious opportunity. The doctor should be not only a medicine man but also a teacher. Teach your patients the essential fallacies of cultisms and quacks; you will in this wise

spare your patients and yourselves. But to do this efficiently you must be informed.—New York Health Bull., May 8, 1926.

In discussing May Day and its conversion into Child Health Day, the "Long Island Medical Journal" says editorially: "We note the enthusiasm and sincerity for the promotion of child health in the many agencies, official and unofficial, engaged in the general plan of community betterment.

"We observe with regret that in the programs so far coming to our attention the physician—as an individual and as a part of organized medicine—is in the main left out of the picture. True enough the school physician is mentioned at times.

"Is it possible to adequately protect and promote the health of the child? Or, to use the Child Health Organization's own slogan, 'Make health and happiness every child's birthright,' without the physician as an individual, and his medical society as an organization?"

Should industry pay less than the average cost of hospitalizing patients, the actual cost or more than the actual cost? Is the hospital justified in reducing its charges to industry below a cost basis, or should it charge an additional amount above actual cost, knowing that industry can pass it on in an increased price for its products? What are the costs to industry of hospitalizing its cases, and what are the bed-day charges in different localities?—F. L. Rector, *Nation's Health*, May 15, 1926.

Our present policy in medical education is directed to the Europeanizing of medical service. I picked up the "British Medical Journal" of November 14, 1925, and my eye fell on a report of a recent conference in London on the place of the midwife in the maternity service. I find the first sentences in the opening of the discussion as follows: "Dr. J. S. Fairbairn in an opening paper urged that there need be no rivalry between the general practitioner and the midwife. Their functions were not competitive but complementary. *The sphere of the midwife was attendance upon normal labor, and that of the practitioner was the general supervision of the antenatal and postnatal conditions and attendance on difficult labor.*" (Italics mine, W. A. P.) That is what we are heading for in medical service now. Obstetrics is a function of midwives, except in abnormal cases!—William Allen Pusey, *Jour. A. M. A.*, May 15, 1926.

The Marion Ohio Circuit Court in upholding the right of the State Board of Medical Registration and Ex-amination to revoke the license of a physician who loans his license, gains in weight each day and has established a precedent in Indiana. *It means that any licensed doctor in the State of Indiana who works in an office or so-called medical clinic, associated professionally with nonmedical men, is guilty of aiding and abetting a fraud and that the courts will uphold the findings of the board.* This is the second time in the United States and the first time in Indiana that the court has sustained such a finding by a state board. Judge Chamberlain's findings is far reaching and should help the State Board in its efforts to clear the state of quacks who are ever preying upon the public.—J. Indiana M. A., May 15, 1926.

Many newspaper editors sensed a strong sentiment at the recent National Health Congress to elevate nurses to a position of "equal partnership" with physicians in serving the cause of health. The age-old relationship of doctor and technical assistant was deprecated as undignified for nurses. To make the equal partnership—and, of course, equality in responsibility—applicable, it was proposed to give nurses more courses in this, that and the other subject.

Of course, if nurses are given the necessary education, the matter of partnership will need no discussion because the nurses will be doctors. Many of them enter the "partnership" in this manner. But what about technical assistants to doctors when the nurses all have a medical education?

Long before that time arrives there will be a new class

of nurses to carry on the traditional service of these devoted women, who will neither have nor need a medical education, and who will not want to be near-doctors.

In Kentucky, according to a report by the Medico-Legal Committee of the Kentucky State Medical Association, the Court of Appeals has held that lack of x-ray pictures of fractures is "*prima facie* evidence of malpractice," if there is any possibility of obtaining x-ray pictures. "In the same way," the report says, "our Court of Appeals has decided that failure to administer antitoxin promptly, as promptly as it can be secured after a diagnosis of diphtheria, is malpractice."—Ohio Health News.

There are 107 hospitals in the United States for the care of contagious diseases. These institutions, with an aggregate capacity of 9309 beds, must perform the enormous task of caring for those of our 117,000,000 people who contract contagion.

It has been estimated by various investigators that for urban population one bed for every 2000 persons is necessary for this purpose. But in the United States as a whole there is but one-sixth as many beds as would be required if this ratio were maintained.

That provisions for the care of contagious diseases are inadequate throughout the hospital field appears indisputable. Especially is this true in the rural districts, where too often the old-time pesthouse—which is too frequently all that its name implies—still exists.—Modern Hospital.

Among the chronic diseases cancer steadily increases its toll of victims. The incidence of diabetes grows greater year by year, and though in insulin we have a powerful weapon against it, we have no sure knowledge of how the disease may be prevented. Arteriosclerosis and nephritis are not becoming less prevalent.—Boston M. and S. J., April 22, 1926.

"The spring months bring municipal elections and consequently many changes in health officers," says the Bulletin of the California Board of Health. Among those recently announced are the following:

Smith A. Quimby succeeds G. G. Hawkins as health officer of Madera County. Both are licensed to practice medicine and surgery in California and are members of the California Medical Association.

Robert Evans of Concord has been appointed city health officer to succeed George McKenzie. Both are licensed to practice medicine in California and are members of their county and state associations.

G. L. McLellan has been appointed city health officer of San Leandro to succeed Mr. F. A. Nikirk. Doctor McLellan is licensed to practice medicine and surgery in California, but is not a member of the California Medical Association.

Glenn T. Logsdon has been appointed city health officer of Oceanside to succeed H. F. Crandall. Doctor Logsdon is licensed to practice medicine and surgery in California, but is not a member of the California Medical Association. Doctor Crandall is a member of the California Medical Association.

H. M. Hawkins has been appointed city health officer of Taft to succeed M. W. Pascoe. Both are members of the California Medical Association and, of course, licensed to practice medicine and surgery in California.

The Census Bureau announces that the birth rate for 1925 was lower than for 1924, and that the death rate was higher for the same period.

The report states that the infant mortality rate was also higher for 1925 than for the preceding year.

There are as many explanations of these discouraging figures as there are of Vare winning the senatorial nomination in Pennsylvania on a "wet platform."

Birth control practitioners may find some consolation in the lessened birth rate, but surely only microbes of various kinds and sizes may find satisfaction in the increased number of deaths.

Those who serve should buckle their armor tighter and intensify the offensive.



## CALIFORNIA MEDICAL ASSOCIATION

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 PERCY T. PHILLIPS, M. D. .... President-Elect  
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### PROCEEDINGS OF SCIENTIFIC SECTIONS 1926 C. M. A. MEETING

(Abstracts from Minutes of Those Sections Whose Secretaries Have Sent in Their Reports)

#### DERMATOLOGY AND SYPHILOLOGY SECTION

Secretary's Report (Samuel Ayres, Jr.)

Three meetings were held: The first on April 28, with a symposium on allergic skin diseases, Moses Scholtz, presiding. The attendance was about sixty. The program was carried out as published in the April issue.

The second meeting was held on April 30 and was a symposium on syphilis. The attendance was about the same as on the previous day. Again the program as previously published was carried out.

The chairman, Moses Scholtz, appointed the following: H. E. Alderson, Laurence Taussig and Samuel Ayres, Jr., a committee to draw up a resolution regarding the use of x-ray for the removal of superfluous hair.

The third meeting on May 1 dealt largely with cutaneous neoplasms.

H. E. Alderson as chairman of the committee appointed for the purpose of presenting a resolution regarding the use of x-ray for the removal of superfluous hair, offered the resolution voicing the sentiment of the section on dermatology and syphilology as being strongly opposed to the use of x-ray for the removal of superfluous hair as it is being advocated by certain nonmedical practitioners, in view of the fact that the destruction of the hair root by means of x-ray is almost invariably accompanied by damage to the skin resulting in atrophy.

The sense of this resolution was unanimously approved by the section.

The following were elected officers for the ensuing year: H. E. Alderson, chairman; E. K. Stratton, vice-chairman; C. E. Schoff, secretary.

A dermatological clinic was held by Doctor Clark at the Ethel Moore Memorial Hospital on April 29.

#### GENERAL MEDICINE SECTION

Secretary's Report (J. Marion Read)

First Meeting called to order by the chairman at 2:15 p. m.

The scientific program of this and all other meetings was carried out as published in the April issue of CALIFORNIA AND WESTERN MEDICINE.

At 2:45 attendance was 112. It reached a higher figure later as forty-seven others came in after the above count was made. Others left also, in consequence of which the attendance varied from time to time.

Second Meeting—Election of officers: J. Marion Read, San Francisco, was elected chairman and James F. Churchill, San Diego, secretary, to serve in their respective capacities for 1927.

The attendance at this meeting was the largest of any, due to the fact that the Surgical Section was not in session on this afternoon. At 3:30 there were about 150 present.

Third Meeting—The scheme was tried for the first time at this 1926 meeting, I believe, of setting a time clock at the start of each paper, the clock set so that it automatically rang at the end of the fifteen minutes allowed for each paper, notifying the reader that his time was up. No one was stopped at this time, but the responsibility of continuing was upon the reader. This impersonal manner of keeping the time, which allowed of no partiality being shown, was, to my mind, very satisfactory. At least it did not require that the chairman interrupt the speaker to tell him his time was up. No

adverse comments were heard upon this plan of running the meeting. Several favorable comments were expressed to the effect that the meetings were conducted in a dignified manner and run off expeditiously.

The average time consumed by the fifteen papers was 16.6 minutes, ranging from 9.5 to 24.5 minutes. It is exceedingly difficult and sometimes unfair to hold a speaker to the exact fifteen minutes and since few utilize the allowance of four minutes for final discussion I see no objection to allowing a speaker to run over a minute or two. The greatest excess of time was 9.5 minutes and from the nature and interest in the paper it seemed justified. I think it well to announce a time limit of fifteen minutes so speakers will try to keep their papers within that limit, but I believe the chairman must be allowed to permit some to exceed this limit. The total time of each day's program was kept within 2.5 hours, which is the essential point.

#### GENERAL SURGERY SECTION

Secretary's Report (John Homer Woolsey)

Minutes of the meeting of the General Surgery Section of the fifty-fifth annual session of the California Medical Association, which was held on April 28, 30 and May 1, 1926, at Ebell Hall, Oakland.

Officers of this section: Thomas O. Burger, chairman, National Bank Building, San Diego; Edgar L. Gilcreest, vice-chairman, Fitzhugh Building, San Francisco; John Homer Woolsey, secretary, Medico-Dental Building, San Francisco; John H. Breyer, assistant secretary, 864 South Madison Avenue, Pasadena.

First Meeting, April 28, 1926—Meeting called to order at 2:30 p. m., Thomas O. Burger, chairman, presiding. The program was carried out as published in the April issue of CALIFORNIA AND WESTERN MEDICINE, with the exception of the paper entitled, "Dislocation of the Outer End of the Clavicle," by John Dunlop, Pasadena, which was placed in the hands of the secretary, but the author was unable to be present to read it. Therefore, the paper was not given. Sixty-four persons in attendance at this session.

Second Meeting, April 30, 1926, called to order at 2:30 p. m., Thomas O. Burger, presiding. Program as published with exception of paper entitled, "Diagnosis and Treatment of Echinococcus Cysts of the Liver," by Lucius W. Hotchkiss, Santa Barbara, which was received by the section secretary but not read due to the death of the author shortly before the date of the meeting.

One hundred and sixty-four persons in attendance at this session.

Third Meeting, May 1, 1926, called to order at 10 a. m., Thomas O. Burger, chairman, presiding.

Election of section officers (1926-27) resulted as follows: Fred R. Fairchild, Woodland, chairman; Joseph K. Swindt, Pomona, vice-chairman; John H. Breyer, Pasadena, secretary; Edmund Butler, San Francisco, assistant secretary.

No other business transacted.

The scientific program was continued and carried out as published.

Seventy-eight persons in attendance at this session.

#### PATHOLOGY AND BACTERIOLOGY SECTION

Secretary's Report (Roy W. Hammack)

The meeting of the Pathology and Bacteriology Section was held Friday, April 30, at 2:30 p. m.

The first paper, "Quantitative Examination of Albumin in Urine," by A. M. Moody, was discussed by W. T. Cummins of San Francisco and Roy W. Hammack of Los Angeles.

The second paper, "The Experimental Production of Arteriosclerosis," was discussed by W. D. Sansum, Santa Barbara; Newton Evans, Loma Linda; A. M. Moody, San Francisco; Roy Stevenson, San Diego; and W. T. Cummins, San Francisco.

The third paper, "Chronic Appendicitis," by H. E. Butka, was presented by O. T. Cuttler in the absence of Butka. It was discussed by H. J. Ullmann, Santa Barbara.

The fourth paper, "The Action of Spider Poison," by Emil Bogen and George D. Maner, was not discussed.

The fifth paper, "The Relation Between the Clinician and the Clinical Laboratory in the Standardized Hospital," by Roy Stevenson, was discussed by A. M. Moody, San Francisco; W. T. Cummins, San Francisco; Roy W. Hammack, Los Angeles; and Elmer W. Smith of San Francisco.

A. W. Moody of San Francisco was elected chairman of the section for the coming year and Roy W. Hammack of Los Angeles, secretary.

#### RADIOLOGY SECTION

Secretary's Report (Frederick H. Rodenbaugh)

The section held an informal business meeting; no scientific program was attempted.

Election of officers: J. W. Crossan, Los Angeles, chairman; R. F. Kile, San Francisco, secretary.

It was decided at this meeting that the Section on Radiology resume a place on the program and hold regular sectional meetings which were discontinued at the Oakland meeting.

#### SECTION ON TECHNICAL SPECIALTIES

##### Minutes of the Sixth Annual Meeting

Edna J. Shirpser, president, Children's Hospital, San Francisco; Sophie H. Mersing, secretary-treasurer, Mount Zion Dispensary, San Francisco.

The fifth annual meeting of the California Association of Medical Social Workers opened with a luncheon at Hotel Oakland, Edna J. Shirpser, president; Sophie H. Mersing, secretary. Delegates from Los Angeles, San Francisco, and medical social workers representing the various agencies in Alameda County were present.

The program meeting followed, with 150 people in attendance.

The following program was presented:

President's and Secretary's report.

Medical Social Service in Government Hospitals, Evelyn Z. Phelps, Pacific Division American Red Cross, San Francisco. Discussion, Major R. A. Davison, Letterman General Hospital, San Francisco.

Work of the Cardiac Clinic, Sarah Robertson, Children's Hospital, Los Angeles.

Advantages of Medical Social Service in Orthopedic Surgery, George C. McChesney, Fitzhugh Building, San Francisco. Discussion, Lionel D. Prince, Medico-Dental Building, San Francisco.

The Medical Social Worker and the Problem of Man-kind, Percy T. Magan, White Memorial Hospital, Los Angeles.

On What Financial Basis is Clinic Care Determined. Discussion opened by N. Florence Cummings, Stanford University Hospital, San Francisco; William Dock, Stanford University Hospital, San Francisco; Fred Firestone, Mount Zion Hospital, San Francisco; Paul Castelhun, Saint Luke's Hospital, San Francisco; Rudolph Dresel, Children's Hospital, San Francisco; Ida T. Fleming, Children's Hospital, San Francisco; Alice M. Keane, Saint Luke's Hospital, San Francisco; Josephine Abraham, Mount Zion Hospital, San Francisco; Marcella Leonard, San Francisco Hospital, San Francisco.

Business meeting.

Following Doctor Magan's paper we were favored with a short address by W. E. Musgrave, editor of CALIFORNIA AND WESTERN MEDICINE, honorary member of our association, and friend.

The following officers were elected: Ray Lyman Wilbur, Stanford University, chairman of Technical Specialties Section; John C. Wilson, 410 Medical Office Building, 1136 West Sixth Street, Los Angeles, secretary.

California Association of Medical Social Workers: Sophie H. Mersing, Mount Zion Hospital, San Francisco, president; Viola Cohick, vice-president; Elizabeth H. Moore, Letterman General Hospital, San Francisco, secretary; Marion T. Maxwell, Haight Street Health Center, San Francisco, assistant secretary. Directors: Edna J. Shirpser, Children's Hospital, San Francisco; Kathryn Thomason, White Memorial Hospital, Los Angeles; Rose Steinhart, University Hospital, San Francisco; C. Ruth Hersey, Stanford Hospital, San Francisco.

The meeting was by far the largest and most gratifying of any held previously, and marks a turning point of progress for our organization.

#### CALIFORNIA ASSOCIATION OF MEDICAL SOCIAL WORKERS

##### A Unit of the Section on Technical Specialties of the California Medical Association

President's Address, 1926

EDNA J. SHIRPSE, R. N.

This is the fifth annual meeting of the California Association of Medical Social Workers. Since our organization we have endeavored to maintain the standards laid down in our Constitution. Our policy is to eventually develop an organization in California which will standardize Medical Social Service and place it before the community as a recognized profession.

We hope to bring before the physicians our desire for co-operation by assisting them in providing adequate care for patients unable to pay for medical attention.

No institution caring for free or part-pay patients can function properly without the medical social worker. It is not only our duty to help carry out the physician's instructions, but we must also prevent those able to pay for services from taking advantage of the physician's generosity.

We thoroughly appreciate the opportunity presented us to take part in the annual program of the California Medical Association. We hope that our program has much to interest the physician as well as the medical social worker.

At present our membership is limited to the San Francisco and Los Angeles sections. The medical social workers of Alameda County have been invited to attend this meeting, and if our efforts can instil enthusiasm among our Alameda County co-workers we shall be grateful. It is our earnest desire to establish an affiliation in the East Bay section.

May I take this opportunity to thank Dr. Ray Lyman Wilbur, our chairman of the C. M. A. Section on Technical Specialties, for his interest in our activities and our officers and members for their co-operation during the past year.

#### CALIFORNIA ASSOCIATION OF PHYSIOTHERAPISTS

##### Minutes of the Sixth Annual Meeting

By MABEL PENFIELD, *Secretary*

The sixth annual meeting of the California Association of Physiotherapists was opened by the vice-president, Florence Burrell. After reading Doctor Wilbur's note of regret that he could not be present, she welcomed the members and visitors, and continued with the opening address on "The Present Uncertain Status of the Physiotherapy Technician." Announcement was made of our Association Placement Bureau, which is permanently located at Hahnemann Hospital, San Francisco, under the direction of the head technician of the physiotherapy department.

The guest speaker of the afternoon was Harold Hitchcock of Oakland, whose subject was "The Relation of Posture to Lower-Back Strains." Doctor Hitchcock emphasized the importance of training the posture sense, and using a few exercises only as means toward that end. Three sets of muscles have been much neglected in posture work, he stated; they are the gluteus, the oblique abdominal, and the diaphragm. He illustrated on the blackboard the six or eight exercises that he uses.

The two remaining papers of the program were given by members of the Association and presented points in the technique of certain treatments. Hazel Furscott gave a "Practical Discussion of Diathermy Technique, Results, with Case Reports and X-Rays in Bursitis, Arthritis, Back Strains." She gave a practical demonstration of the choice and placing of electrodes.

The final paper was read by Mabel Penfield, "Quartz Lamp Technique and Case Reports, Examples of Successful and Unsuccessful Results in Cases of Eczema, Osteomyelitis, Gland Tuberculosis, and Varicose Ulcers." Discussions by visitors and members followed each paper.

The annual business meeting was held immediately following the program. The secretary's report of the fifth annual meeting was read and accepted. The treasurer's



report was referred to the first monthly meeting. The following business was transacted:

A motion was carried to retain the same officers of the Technical Specialties Section, namely, Doctor Wilbur, president, and Doctor Wilson, secretary.

The following motion was carried: that the past presidents and secretaries of the northern branch be appointed to a committee to gather together and print the by-laws that have been formulated from time to time.

A motion was carried that W. E. Musgrave, San Francisco, and E. W. Cleary, San Francisco, be declared honorary members of the Association.

Discussion (at the vice-president's suggestion): That local officers and executive committees for both northern and southern branches be elected each year to transact the business pertaining to that branch. A motion was carried that this subject be submitted to the new officers.

Discussion (at the vice-president's suggestion): That a report be issued periodically containing business transactions, suggested policies, and general news of the Association for the benefit of those members living away from the cities where the meetings are held. A motion was carried that the secretary be instructed to recommend to the new Executive Committee that they appoint a member to gather material for and edit a monthly bulletin, for which this same editor shall receive adequate remuneration.

The following officers for the ensuing year were elected: Antoinette White, Hollywood, president; Margaret Blake, Los Angeles, vice-president; Helen Paull, Los Angeles, secretary-treasurer.

**From the President's Opening Statement**—The California Association of Physiotherapists is happy to welcome its members and guests to its annual meeting. We have chosen part of our program this year with the idea of giving some points of technique in physiotherapy treatments rather than types of patients to be treated.

There is a difference between the technician who knows fundamentals of physiology and anatomy, electricity and hydrotherapy, and knows how to apply them intelligently and who, moreover, is always ready to learn something new, and the person who is self-trained or goes out from one of the electric companies and applies electrodes and turns on switches not even in the name of electrotherapy, but of physiotherapy. People are coming to the office constantly with physiotherapy on their cards who know nothing but mechanical massage.

Where are we and who are we? How are we going to make the medical profession recognize that when they have tried physiotherapy and failed, the reason may be improper technique by an untrained physiotherapist. We have no letters or title. Anyone may call himself a physiotherapist, and we can do nothing about it. But what we can do is to try to register all those who come up to the standards in our constitution, to have their names on file, and to give them membership cards so that a doctor may be assured of the qualifications of the physiotherapist he employs by asking for the card or writing to the placement bureau. Our bureau is with the head physiotherapist at Hahnemann Hospital, San Francisco. The main work of our Association this year should be to make this bureau most effective by increasing the registration, raising the standards of physiotherapists and, in turn, that of physiotherapy.

Harold H. Hitchcock of Oakland in discussing the relation to posture to low-back strain said in part:

"What constitutes correct posture is, of course, well known to you who are doing physiotherapy. By this we generally mean that one should hold the head up, the chin in, and back flat, the gluteal muscles tense and abdomen in, rather than standing with the pelvis tilted forward and the lumbar spine hyperextended, as is commonly seen in the individual who sustains a low-back strain.

"One of the most important things in clearing up low-back strains is to correct their faulty posture and give them exercises to develop the muscles which are necessary to maintain this corrected posture.

"The correction of posture should be the real end in view and not the exercises, the exercises being only the

means to that end. Too often the individual receives exercises and posture work, and treatment for back strain is lost in the haze of a complicated system of exercises. He knows not what he is striving for, and is the individual who comes back and says, 'I did your exercises and I am no better.'

"Therefore let me emphasize that the correct posture should be taught with all the emphasis on the correct posture and the exercises be given as a side issue to develop the trunk muscles and make these exercises simple."

Hazel Furscott discussed diathermy technique. "Diathermia," said the speaker, "is heat produced within living tissues. This heat is developed in the passing of an electric current through the body tissues by placing electrodes on the skin on either side of the part to be treated.

"A very great amperage is necessary to pass appreciable heat through the body tissues, and so the high frequency type machine is used. The high frequency machine gives an alternating current of greater frequency than that which will produce muscle stimulation. Briefly, it consists of four major parts: the transformer to step up the street alternating current from 110 to 3000 to 4000 volts; the condenser to increase the frequency of alternation; the spark gap to measure the amount of current entering the patient; and two oscillation transformers. The so-called D'Arsonval current is used for medical diathermy because it has the largest amperage.

"Other methods of producing heat—the baker, hot water bottle, poultice, compress, hot-air bath, etc.—are valuable, but do not offer the deep penetration of diathermic heat. The other advantage of diathermy is the possibility of definite dosage over a definite body area. Deep penetrative, local measured heat, then, is the therapeutic value of diathermy.

"The technique for local diathermia is simple. It must be very carefully applied, however, as it may cause very severe burns.

"1. The patient must be comfortable. He is to remain in one position for twenty to thirty minutes.

"2. Sedative treatment is desired; that is a dose well within the patient's tolerance over a period at least of twenty-five to thirty minutes. For sedative effects the current should be slowly turned on with no break in the current and slowly turned off. Sudden breaks in the current are stimulative and tend to set up a reaction within the joint.

"3. The choice of material, size and placement of the electrodes depends on the location of the treatment. The materials most in use are pliable block tin, cut by the technician to fit the part, and German silver mesh, to be used on uneven surfaces of the body such as the shoulder, etc. Saline solution may be also used as an electrode. Bare metal moistened with soapy water should be used. Do not use felt or cotton pads soaked in salt water, as they dry out unevenly, tend to steam and cause burns. The pads should be as large as possible to fit the part. Electrodes which are too small tend to slip, and also concentrate the heat to the degree of burning. If a small electrode is used as an active one and a larger one indifferently, the heat will be focused at the smaller electrode, and its size determines dosage. The placement is much under discussion. I think that the practitioner will find that the opposite half-cuff method meets the contours around the knees, elbow and shoulder, and the ankle is best treated with the foot submerged in water, the other electrode above the ankle, the back, hip and neck by the 'through-and-through' method.

"4. The wires should not be heavy enough to pull off the electrode, and should be insulated.

"5. Elastic bandages to hold the electrode on firmly and snugly are necessary to eliminate burns.

"6. Clips are of greatest importance. They should be secure either by a spring or soldered on, and they should be as flat as possible.

"7. Rubber pillows, sponges, sheeting, sandbags, are necessary accessories to the comfortable diathermy treatment.

**Summary**—Diathermia is heat generated within living tissues causing deep hyperemia. It, therefore, is especially adapted to the treatment of arthritis and bursitis.

as they are diseases calling for analgeic, bactericidal, solvent, and absorptive treatment."

Mabel Penfield in her discussion of quartz lamp technique said:

"About a year ago the Alameda Health Center installed in their physiotherapy department two quartz mercury lamps, an air-cooled lamp, and a water-cooled lamp. During the year the technicians in that department have treated about 100 patients with diagnoses of about everything, including rickets, tuberculosis, duodenal ulcer, diabetes, varicose ulcer, skin eruptions of many kinds, etc., and from them I have chosen about eighteen cases to review.

"My conclusions are in connection with ulcers, osteoglands:

"1. The conservative treatment is very slow or useless. Blistering treatments plus general raying with ACL were factors in the successful cases.

"2. In ulcers, whether the result was complete healing or not, the pain was relieved after one or two treatments.

"3. In osteomyelitis cases, though unfinished, the soft parts became more pliable, increased in size, and improved in circulation."

A number of the papers read at the meeting will be published in full elsewhere.

### ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting of the Association was held at the Ethel Moore Memorial Building, May 17, J. K. Hamilton presiding. The program consisted of case reports by members of the staff of Providence Hospital. S. A. Jelte reported a case of generalized Hodgkin's disease in a male, aged 45 years, which had persisted for three years and which completely disappeared following an attack of severe erysipelas. The diagnosis was confirmed by section of an excised gland. It is now twenty-two months since the attack of erysipelas, and there has been no recurrence of the symptoms of Hodgkin's disease. X-ray therapy was used with good effect in controlling the mediastinal and abdominal lymphatic enlargements prior to the development of the erysipelas.

J. Elliott Royer reported a tumor of the cauda equina in a man aged 57, with a history of hematuria at intervals since August, 1924. Six months later he complained of unilateral pain in the lumbar region radiating downward, simulating sciatica. Three months later pain was bilateral. Both legs grew weak and he was soon unable to walk. Examination in September, 1925, revealed definite tenderness by digital pressure on both sides of the spinous processes of the second and third lumbar vertebrae, and when assisting him to a sitting position excruciating pain was provoked in the lumbar region and both legs. There was incomplete flaccid paralysis of the lower extremities, with a loss of the deep and superficial reflexes. Sensory loss was notably slight, not symmetrical and not sharply segmental. Spinal fluid was straw color and difficult to obtain. Queckenstedt's test was positive. X-ray showed very slight changes in second lumbar vertebra. No bladder or rectal disturbances. Diagnosis was made of pressure upon the cauda equina, due to metastatic growth of vertebra. The history of hematuria suggested hypernephroma as the probable primary center. Three months later flaccid paralysis was complete, the area of sensory loss was greater, and he had lost control of his sphincters. One month later he died. Autopsy confirmed the diagnosis, revealing a large hypernephroma and a tumor mass on the left side, involving the first, second and third lumbar vertebra. The tumor tissue had replaced some of the bone structure of the second lumbar vertebra, and was pressing upon the cauda equina. In the majority of cases malignant disease of the spine runs a rapid course, especially as regards the neurological symptoms, and often produces a complete flaccid paralysis; while primary tumor of cauda equina progresses more slowly, and complete flaccid paralysis is rare. The late appearance of anesthesia following the early and profound motor paralysis might be explained by the fact that the sensory roots in the cauda equina are larger than

the motor roots, hence earlier irritation of the sensory roots causing pain. But the anesthesia followed motor paralysis, probably because the sensory root fibers possess a greater power of resistance. Absence of bladder and rectal disturbances mean that the conus is not involved. The presence of these symptoms, however, give little assistance in localizing, since we have the same symptoms whether the pressure is upon the roots near the exit from the conus or in the lower part of the cauda equina.

E. H. Barbera reported an unusual case of intussusception.

O. P. Stowe reported a case of extra articular osteoma of the right knee joint within the patella ligament, following injury in a boy 14 years of age. Synovitis preceded the appearance of the tumor, which was first noted in x-ray examination six months after trauma. Two years from original injury a flat, heart-shaped bony tumor, which was found on microscopical examination to be an osteoma, was removed, seven centimeters long, five centimeters wide, and one centimeter thick.

George McClure reported the case of a girl 14 years of age who, in a fit of laughing, aspirated a pin. She was suddenly seized with a severe coughing and choking spell. This subsided somewhat, and as long as the patient was quiet she did not have any trouble, but the least exertion started her coughing. She was sent immediately to the hospital and an x-ray taken. On indirect examination no foreign body was seen in the nasopharynx, throat or larynx. X-ray showed a straight pin about one and one-quarter inch long, with head resting on the cricoid and point directed posteriorly and upward. Suspension advised. Suspension bronchoscopy, ether anesthetic. No foreign body seen in larynx or trachea. Further x-ray, pin was discovered in lower right bronchus, head down. Further suspension, but unsuccessful in locating or removing pin. Time: one hour and fifty minutes. Anesthetic discontinued a short time previous, and patient semi-conscious when the tube was removed. A severe vomiting spell followed with coughing. Progress of patient good. X-ray of lungs did not reveal any foreign body. X-ray of gastro-intestinal tract revealed straight pin in ileum. Pin passed spontaneously and recovered. Impossible for pin to be in esophagus at time of second x-ray examination because of remoteness to right side. Only possibility of spontaneous expulsion from lungs and subsequent entrance into esophagus and stomach.

Frank S. Baxter discussed "The Control of Head Pains or Headache Through the Nasal Ganglion." The sensory supply of the nose and paranasal sinuses was traced, briefly, from the nasal ganglion to the terminal distributions of the important nerve center. The intimate relationship of the ganglion to the contiguous posterior group of paranasal sinuses and its superficial location, with reference to the nasal mucosa, was stressed. The writer was able to control many intractable lower-half headaches by cocaineization of the nasal ganglia. Oculo-orbital pain in a case of kerato-conjunctivitis, secondary to a purulent ethmoiditis, was immediately relieved and the indicated intranasal surgery done with the same anesthesia. Several cases of hay fever or hyperaesthetic rhinitis were markedly or totally relieved of their distressing symptoms by the treatment of the nasal ganglion. A true herpes ophthalmicus was promptly controlled by applications to the ganglion of the side affected. Concluding he showed that many of the foregoing results lack an adequate anatomical basis for their explanation, due to the fact that the function of the sympathetic nervous system and its interganglionic connections is but poorly understood. We only know that they do exist and that in many cases they may be of greatest assistance in relieving our patients of distressing symptoms.

N. Austin Cary reported a case of osteomyelitis in a child in which the initial infection began at 6 months of age from a small local skin lesion upon the buttocks. The first bone foci appeared at 1 year of age, followed during the next five and one-half years by repeated foci of the long bones and soft parts, the organism in each instance being a pure staphylococcus aureus. Repeated attempts to obtain growth from blood-stream cultures were negative. The initial bone lesion was extremely toxic. Temperature 102 to 106, with marked loss of weight covering a period of four weeks. Convalescence was



rapid after radical drainage of abscess in femur. Subsequent attacks occurred at irregular intervals of from two to twelve months, the greater number of foci occurring in the femurs. In the foci opened before abscess had ruptured into the soft parts, the local manifestations were found to be typical in appearance of a furuncle of the soft parts, a circumscribed elevation one-fourth inch high springing from a base twice as wide directly over the bone cortex; the tip of the elevation was soft, yellow in color, gradually blending into deep red, then gradually fading to natural bone color of the cortex at the base. On excision of the area the yellow core extended down to the cancellous bone and occasionally into the bone marrow. During the five and one-half years the foci recurred in various locations. The child was operated upon twenty-eight times and forty-eight incisions made, twenty-eight to drain bone foci and twenty abscesses in the soft parts. A septic myocarditis was the most serious complication, showing evidence of its presence for two and one-half years. Approximately two years had elapsed since the last operation. The thighs were extensively scarred from the incisions; no loss of function resulted. A coxa valga deformity of the left hip gave no symptoms. The heart lesion had completely cleared. Autogenous vaccines were used; the extent of benefit was undetermined. Incisions with drainage, rest, reconstruction by dieting and nursing gave the best results. Incisions were always drained and not permitted to close. Early closure resulted in formation of soft tissue abscesses. The author emphasized the necessity of early diagnosis of the developing foci before destruction had progressed sufficient to be shown by x-ray. Local stiffness with restricted movement, mild at first but gradually increasing, pain, swelling with increased white cell count, mild but increasing, should be sufficient evidence of developing foci. No advantage was gained by waiting for pointing. Radical excision of bone was advised against, preferring multiple bone openings to chiseling, except the point foci, which were excised in mass.

**A Tribute to Edith S. Brownsill by May E. Walker—**  
 "The Alameda County Medical Association has set aside this time in the regular program to offer a tribute to Dr. Edith Brownsill, whose life came to its close on April 26, 1926. For twenty-one years Doctor Brownsill shared with us all the ministry of healing. She was, in the fullest sense, a beloved physician. For her the practice of medicine was a constant search for more abundant life for all who came to her for counsel and care. She never asked what her work would bring her; never sought to build up a moneyed clientele; made no plans on anticipated large returns. For her the art of healing was an end in itself; the patient was the means, regardless of wealth, class or culture. Her work was never a task imposed, but rather a cherished privilege. To a rare degree she possessed that depth of spirit which always inspires confidence; her very presence in the sickroom meant that 'hearts were brave again and arms were strong.' Her babies loved her with the fine discrimination of child affection and, although to them a doctor's office meant discomfort if not actual pain, her tenderness beguiled their fears. To their mothers she was strength, courage, and assurance. She inspired her associates with realizable ideals and fine standards of performance. Hers was a ministry of work and of work done to the very fullness of ability. In this high endeavor she spent herself, careless of weariness, lowering resistance and waning vitality. Thus she came to the close of her career a victorious exponent of the noble challenge, 'I am among you as one who serveth.' She left no family in the sense of blood relations, but hers was the great family of devoted patients who loved her for herself. Doctor Brownsill's life will continue in its ministry through many whose lives she touched. Hers is indeed a precious memory."

The meeting adjourned out of respect to Doctor Brownsill.

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## ORANGE COUNTY

**Orange County Medical Association** (reported by D. R. Ball, secretary)—The Society has held a number of very interesting and profitable meetings during the first half of the present year. In March a joint meeting was held with District No. 16, California State Nurses' As-

sociation at which common problems were discussed. E. W. Hayes of Monrovia, who is conducting a diagnostic chest clinic in connection with the work of the staff at the Orange County General Hospital, spoke on "Some Points in the Treatment of Pulmonary Tuberculosis." We all enjoyed the opportunity of becoming better acquainted with Doctor Hayes and of hearing his ideas on this subject.

In April we were entertained in a most delightful manner by Dr. and Mrs. D. C. Cowles at their home in Fullerton. C. E. Phillips of Los Angeles very ably presented the subject of "Focal Infection."

In May a military meeting was held with the idea of increasing interest in the work of the Medical Reserve Corps. Lieutenant-Colonel M. B. Wellington spoke on "The Purpose of the Organization of the Reserve Corp," outlining the organization and working plans of the whole reserve. Lieutenant-Colonel R. M. Fortier spoke on "The Medical Reserve Corps," sketching the history and development of this branch of the service and telling of the advantages in being a member.

In June we dined at Saint Ann's Inn in Santa Ana and, following an enjoyable repast and social hour, listened to a most interesting discourse on "Hand Infections" by Sidney G. Burnap of Los Angeles.

The Santa Ana Clinical Society has also held several instructive meetings. In March Sterling N. Pierce of Los Angeles talked on "The Kielland Forceps." At the April meeting Woodley Stellar of Los Angeles gave a paper and demonstration on the "Unger Method of Blood Transfusion." In May Merrill W. Hollingsworth of Santa Ana spoke on "Bismuth in the Treatment of Syphilis." All of these talks were both interesting and practical in nature.

The staff of the Orange County General Hospital has completed its first year of service with satisfactory results. It is composed of twenty-two members and is conducted on the rotating plan, each member serving four months on his service. The work is divided into the services of internal medicine; surgery; obstetrics and gynecology; pediatrics; eye, ear, nose, and throat; neurology; urology; roentgenology; and pathology. Out-patient clinics are conducted in all departments. Special clinics are conducted in orthopedics, attended by two specialists from Los Angeles, and in tuberculosis, attended by a specialist from Monrovia. A Social Service department investigates the eligibility of all cases before admission and aids in the follow-up work. The hospital is now accredited by the American College of Surgeons, and necessary steps toward recognition as a Class A hospital by the American Medical Association are now being taken.

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## SACRAMENTO COUNTY

**Sacramento Society for Medical Improvement** (reported by Bert S. Thomas, secretary)—The May meeting was held on the lanai and west porch of the Hotel Sacramento, President C. E. Schoff presiding. Thirty-one were in attendance.

**Under Case Reports**—Ecatena advised that cases of typhoid are still being admitted to the County Hospital from the down-river districts, particularly around Isleton. He suggested that any case of otherwise unexplained fever coming in from that territory be immediately placed under suspicion.

The subject for the evening's discussion, "The Industrial Aspect of Inguinal Hernia," was treated by Charles von Geldern. A résumé of his paper follows: "The general agreement among authorities that hernias are rarely of an industrial nature is not shared by the profession at large. The significance of the persistence of the processus vaginalis definitely established by Russel in 1899 and the principles laid down by him somewhat later have been verified by all subsequent investigators.

"The anatomical structure of the inguinal parts, the character of the tissues involved, and the nature of the abdominal viscera prove beyond any question of doubt that hernias cannot appear suddenly in a normal individual. The development is a slow one and means a gradual dilation of the internal inguinal ring and hernial sac so that eventually a loop of bowel is able to enter the latter.

"The act which patients allege caused the hernia is

practically always a mere incident, the last straw on the camel's back.

"Hernias may be divided from an industrial standpoint into three types, namely, the traumatic, the industrial, and the nonindustrial. The first is a medical curiosity because of its rarity. A direct laceration of the inguinal structures by violence occurs. The industrial type of hernia follows a definite injury or extraordinary strain producing a sudden marked increase in intra-abdominal pressure. There is severe pain and an immediate total disability with evidence of local injury due to sudden dilation. In this type there is a pre-existing processus vaginalis. In the nonindustrial type, which forms by far the greatest percentage, a hernia is discovered during the course of ordinary work. There is no history of definite injury or only, at most, straining at lifting. There is rarely pain and only a partial disability.

"It is the duty of physicians to accept as industrial only those hernias which give a definite history of injury. All others should be promptly rejected."

The paper was discussed by Windmuller, Scatena, Hanna, Wahrer, Brendel, Yates, Drysdale, Titus, Foster, and Young. Windmuller believes with the speaker that traumatic hernia is a great rarity, comparable to the "railway spine." Windmuller speaks from years of experience as a railroad surgeon in the East. Young believes that this whole question regarding partial or whole disability should be handled on a relative basis, i. e., even though we may agree primarily that the herniation presupposes a congenital weakening or sacular formation, we must keep the *relative* compensable element constantly in mind. Foster, Yates, Drysdale, and Titus reviewed some of their borderline cases of the type under discussion. Brendel outlined the present stand of the Industrial Accident Commission.

Von Geldern concluded the remarks by reiterating that the peritoneum will not stretch beyond a certain fixed limit. This is the fundamental factor in placing a traumatic hernia as a rarity.

Applications for membership from William Enville Richardson and J. Hidetara Miyasaki were read for the first time.

A communication was read from Robert E. Peers inviting all the members of the Society to attend the Northern District meeting at Colfax on May 27; from O. C. Marshall, calling attention to the fact that he desires an opportunity to become associated with a general practitioner or surgeon in these parts.

Scatena reported as a delegate to the California Medical Association, first calling attention to the comparatively poor attendance and, second, that Sacramento men read no papers at the last state meeting. He stressed the value of presenting papers at these meetings, and thus let the medical profession know what we are doing in Sacramento. He also reviewed the interesting general sections and medical meetings. Harris reported as a delegate, calling particular attention to the fortune we had in electing Percy T. Phillips as our president. He marks Phillips as a man outstanding in the building as well as the safeguarding of our profession. The secretary reported the luncheon-meeting of the county presidents and secretaries. First, the present dues of the Association are thoroughly warranted; second, the history of the State Association is rapidly being compiled. The plan is to have a permanent history in Lane Library; third, the matter of industrial medicine and contract medicine, with particular reference to the ethics of the same, is being actively investigated by the committee in charge. Lastly, attention was called to amendments pertaining to the election of a speaker to the House of Delegates and the power of a credentials committee.

The meeting adjourned to the banquet room.



### SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—The May staff meeting of the County Hospital presented a program by the new section of gynecology and obstetrics of the County Society. Doctor Wier discussed at some length the problem of occipito-posterior presentations, enumerating its dangers to mother and child. He stressed the desirability of early recogni-

tion so that the presentation could be changed before the head engages in labor. If unrecognized before this point there remains only the choice between version and Caesarean section. Cleverdon spoke in detail of his visit to Doctor Potter's clinic in Buffalo, describing the man and his methods and giving a vivid portrayal of his technique of podalic version. Doctor Newman gave a résumé of the principle and technique governing plastic surgery of the female genitalia, emphasizing the fact that the surgeon should aim to restore the function as well as the contour of the parts. He described in detail his own tracheloplasty. Newman also presented a case of angioma of the face which he had treated with electrocoagulation methods with exceedingly good results. Worthington showed two specimens of multiple fibroids of the uterus and discussed the history of the cases.

On May 18 at the Golden Lion Tavern the San Diego County Medical and Dental societies enjoyed a dinner together, after which they were addressed by Leon H. Watkins of Los Angeles on the "Urological Aspects of Obscure Abdominal Pain," and by Rea Proctor McGee of Hollywood, who discussed the subject of facial surgery on which he is an authority. Too much cannot be said in approbation of these get-together occasions at which the members of the two allied professions exchange views on subjects of common interest; and it is a noticeable thing in San Diego that each profession is ever anxious to share its good things with the other. Doctor Watkins' paper bristled with diagnostic points, which the careful diagnostician will do well to heed. Only too often it would seem that abdominal and pelvic surgery is undertaken without carefully eliminating the urinary organs as sources of trouble. Altogether the paper emphatically expressed the practical aspects of an important subject in terms that suggested a ripe clinical experience.

The medical society dinner meeting of June 8 brought out a splendid attendance tending to refute the idea that it is necessary to suspend scientific meetings during the summer months. George Piness of Los Angeles gave those attending a masterly talk upon the subject of allergy, tracing the development of allergic studies from its early beginnings to the somewhat comprehensive specialty it represents today. He described in a general way the method of collection and preparation of the protein substances used and the technique of applying them to patients, indicating the most common conditions in which we find allergic manifestations. He said that the allergic individual was such by inheritance and would always remain allergic, although much could be done to make him comfortable. When he discussed treatment of allergic conditions his remarks were free from the dogmatism so often attending statements from the newer enthusiasts. Every case in his opinion should be approached with a liberal application of common sense. A careful physical examination, including x-ray of chest, should be made. The inheritance of the individual should be scrutinized and his environmental conditions, including occupation, living habits, eating, sleeping, etc., carefully studied. Then and not until this has been done should the treatment of the allergy be attempted. Piness is to be congratulated on the amount of careful research work that he has introduced into this branch of medical science. Especially are we indebted to him for the careful study and classification of the flora of the Pacific Coast with the separation of those producing wind-borne pollens.



### SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Fred J. Conzelmann, secretary)—The stated meeting of the San Joaquin County Medical Society was held Thursday, June 3, at W. B. Walker's ranch, eight miles east of Stockton.

Doctor Walker invited the members of the Society to a big feast in the open air on the grounds near his house. At about 7:30 p. m. Walker asked his guests to be seated at the table; fifty-two were present. The president called the meeting to order. The motion of Dewey R. Powell that all business be dispensed with and that the Society make it a purely social evening was seconded and carried. The president asked Doctor Powell to act as toastmaster. After the Society had spent a few hours on an



excellent dinner, during the progress of which the Society was entertained by skilled musicians and singers, the members were requested to enter the beautiful palatial home of Doctor and Mrs. Walker, where J. D. Dameron and Fred P. Clark traced the history and progress of the medical society from its small beginning in 1875 to its present high standard of development. Doctor Werner, professor of history in the College of the Pacific, spoke in a very entertaining and instructive manner on human evolution, from the point of view of the historian. The serious part of the program being concluded, some of the members scattered about in groups visiting, others danced, and some engaged in playing cards. All appeared to thoroughly enjoy the evening. It was late when the members dispersed, all conscious of having enjoyed several pleasant hours in the company of their colleagues where petty jealousies were brushed aside and a social evening was passed that "added to culture, banished selfishness, multiplied usefulness and divided joy." It was a real "get-together" that made everyone feel "united, we stick; and divided we are stuck."

This closes the meetings for the season. There will be no meetings during July and August.



### SAN MATEO COUNTY

**San Mateo County Medical Society** (reported by W. H. Murphy, secretary)—Pursuant to a recently adopted policy of the San Mateo County Medical Society of holding meetings in various parts of the county, the June 16 meeting was held in South San Francisco.

Following dinner at Fraternal Hall, a clinic was held at the South San Francisco Hospital by Edwin Bartlett and Mark D. Lessard.

The problem of attendance at meetings of this society has been largely solved in two ways. One is the writing of a form letter which is distributed to the members a few days before the meeting, giving the program, announcing where the preceding dinner will be held, and stating what business is to be taken up. Each letter urges the member to be present, and to bring physicians from any adjacent counties as visitors. The other means is by making the programs so attractive that most of the members will readily realize the benefits of being present. A self-addressed postcard is inclosed for the member to return, stating whether or not he will attend.

Officers for the coming year are: Howard L. Mawdsley, San Mateo, president; W. O. Callaway, Burlingame, vice-president; W. H. Murphy, Redwood City, secretary-treasurer.

Due to efforts of the American National Health Service to appoint physicians in San Mateo County to look after their work, which consists in medical care of policyholders in nearly all types of cases at "compensation rates," a motion was passed at the June meeting of the San Mateo County Medical Society to bar from membership in the Society any physician who does this type of work. It was the feeling of the meeting that this is a vicious system, aimed at commercializing medical practice for the benefit of these insurance corporations who aim to make a profit from physicians' services. The secretary was instructed to draw up an amendment to the by-laws of the Society to be presented at the next meeting for passage, specifying the type of work in question. The type of work meant is only that stated above, and does not include industrial practice.

It was further decided to have a copy of this resolution, provided it is passed, sent to the secretary of each county society in the state.



### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by A. C. Soper, Jr., secretary)—The regular June meeting was held at the Cottage Hospital on Monday night, June 14, in the staff room. Vice-President H. E. Henderson presided, and there were present twenty-one members, two interns, and as visitors, Drs. Benjamin Merrill, Frank Blaisdell of Santa Paula, and Doctor Lipke of

Rio de Janeiro, Brazil, a former graduate of the College of Medical Evangelists.

The first paper of the evening was upon the differential diagnosis between "Pyorrhea Alveolaris and Vincent's Angina" by Henry C. Bagby, M.D., D.D.S., of Santa Barbara; also illustrated by x-ray films of the jaw and by the presentation of a patient who is undergoing treatment for angina. Discussion was participated in by Mellinger, Sansum, Koefod, Freidell, Ullmann, Henderson, and Merrill.

William B. Bowman of Los Angeles presented a very interesting paper upon "Lesions of the Spine," illustrated with many x-ray films thrown upon a screen which depicted the pathology discussed in his case reports. A long discussion of this paper ensued, in which Ullmann, Rexwald Brown, Koefod, Allen Williams, Mellinger, Gray, and Soper took part.

In the business part of the meeting considerable time was given to a discussion of the fee schedule for industrial accident work, and a letter read from one of the committee on that subject appointed by the Council of the California Medical Association. No conclusions and no "resolutions" came from the discussion, although a very general dissatisfaction was expressed.

The meeting duly adjourned at 10:30.



### SANTA CRUZ COUNTY

**Santa Cruz County Medical Society**—An open meeting was held Sunday, May 16, at Watsonville from 11 to 1 o'clock, followed by a luncheon at the Appleton Hotel.

The subject "What May Santa Cruz County Do to Decrease Maternity Hazards" was discussed under the five-and-ten-minute rule by personal health physicians, public health physicians, nurses, hospital representatives, and representatives of the general public.

The meeting, unique in some particulars, was well attended and the discussion well worth while. Ethel Waters presented an analysis of births, maternal and infant deaths for 1923 and 1925 as revealed by the county records.

According to these records a population of some 30,000 created 577 potential citizens in 1923 and 594 in 1925. Of these, 540 (1923) and 549 (1925) were born alive. Death claimed 37 (1923) and 45 (1925) between conception and one year.

Four mothers of 577 (1923) and none of 594 (1925) made the supreme sacrifice. Of the four maternal deaths (1923) one was caused by ruptured tubal pregnancy; one pneumonia following spontaneous abortion; two abortion and miscarriage. There were 19 (1923) and 22 (1925) stillbirths.

Of the 540 (1923) and 549 (1925) infants born alive, 16 (1923) and 15 (1925) died during the first month. The 15 (1925) deaths were caused by: premature birth, 6; birth injury, 3; cerebral hemorrhage, 2; congenital malformation of the heart, 2; cord hernia, 1; septic throat, 1.

Eight (1925) infants died between one month and one year: one of convulsions, four enteritis, one pneumonia, one accident, one hemophilia. Thus we see that of 549 potential citizens created by a population of 30,000 in 1925 without the loss of a single mother, 22 infants were lost between conception and birth; 15 more between birth and one month; and 8 more between one month and one year. A good record that ought to be further improved.

Several important opinions, suggestions and facts were brought out in the discussion. Reports of representatives of the five hospitals of the county showed that approximately 60 per cent of births occur in hospitals under favorable surroundings and under skilled attention. The opinions of doctors, hospital executives, nurses and representatives of the general public were unanimous that some of these young lives might have been saved by a more general and conscientious prenatal service. The advantage of even more general hospitalization were pointed out. Much good would come from a united effort to induce pregnant women to place themselves under the care of their physician from the beginning of conception. To encourage the practice one speaker suggested that doctors make their maternity fees to include prenatal and postnatal care as a necessary part of the service for which

no additional charge would be made. The Society will consider this and other admirable suggestions at a subsequent meeting.

At the brief business session Peter B. Marinovitch, P. O. Box 286, Watsonville, and Samuel B. Randall, Hihn Building, Santa Cruz, were elected to membership. A new constitution and by-laws was adopted, as was the report of the program committee suggesting that the June meeting be a round table Sunday luncheon for members only.

About thirty attended the luncheon held at the close of the meeting. P. T. Phillips, president-elect of the California Medical Association, was called upon and spoke briefly of the importance of meetings like the one just held and of the responsibility of organizations of physicians in the never-ending campaign to improve the health, comfort and happiness, of all people.

At the round table conference and luncheon meeting held at the Casa Del Rey Hotel, Santa Cruz, Sunday, June 13, further consideration was given to the problem of maternity and infancy hazards and what physicians could do to improve the county's already good record in this respect.

As the official figures quoted above substantiate those from other investigations to the effect that the most promising improvement in both maternal and infant mortality and morbidity may be expected from increased and more general prenatal and postnatal service by the *obstetrician*, a resolution was passed unanimously that:

Hereafter the maternity fee shall include all necessary prenatal and postnatal (one month after birth) service to mother and infant; that all doctors and other health agencies be requested to assist in broadcasting this fact and the reason therefor; that the president of the Society, not being engaged in practice and thus not open to possible adverse criticism, be delegated to solicit the co-operation of the public press of the county in making this valuable information available to all citizens.

**Periodic Health Examination**—With the intention of assuming its legitimate position of leadership in the promotion of health, the Society gave preliminary consideration to the following resolution:

All physicians heartily endorse periodic health examinations for all people of all ages, provided the examinations are made by the family physician and provided treatment for the discovered defects and infirmities is made a consequence of the examination.

To be adequate, examinations, advice and treatment should begin with conception, continue at least once a month until birth, once a week during the first year of life, and once a year thereafter. The examination and treatment of the child about to enter school for the first time and thus begin to be exposed to the increased dangers of infection inherent in crowds, is of outstanding importance. The treatment immediately following this examination should include vaccination to protect the child against smallpox; toxin-antitoxin to protect against diphtheria, and such other protective methods as are endorsed by competent medical opinion.

The Santa Cruz County Medical Society offers these services to citizens of the county and advises and urges acceptance of the offer in the interests of the health of all residents. Fees for these and all other medical and health services are adjusted in accordance with the patient's ability to pay, and if any doctor has more applications for free and part-pay service than he feels able to render, he will refer the surplus to another physician or to the qualified medical service provided for the poor by the county and paid for out of public funds.

All examinations and much of the needed treatment may be carried out with far greater safety, efficiency, privacy, comfort, more useful records and less waste of time of patient and doctor in the doctor's office than elsewhere. In certain instances service in the home or hospital may be advisable; but the congregating of groups of children in particular, in itinerant clinics and health centers is neither necessary nor advisable; is not free from danger, particularly during the prevalence of "colds" or other infections, and invites consequences harmful to all parties through the examination of one doctor's patients by another doctor.

The official public health services—civic, fraternal, welfare and similar organizations—are cordially invited to co-operate with the physicians of the Santa Cruz County Medical Society in this work by actually urging people of all ages, and children in particular, to visit the doctor of their choosing periodically in his office for purposes of examination and treatment.

Santa Cruz County covers only 437 square miles. It has good roads, and one can drive entirely across the county in one of several directions in an hour. There

is a population of about 30,000, of whom 50 are adequately educated physicians, or one doctor to each 600 people. There are about 20 dentists, 45 nurses, and five hospitals with a hospital bed for each 250 people, which is about the optimum proportion.

What Santa Cruz and other, at least nonurban, counties needs is not more health agencies but more extensive use of existing agencies created and licensed to serve the health of each citizen as an individual. This resolution is designed to promote this service and will be finally decided at the round table conference luncheon meeting of the Society at the Capitola Hotel, Sunday, July 11, at 11 o'clock, to which all licensed physicians are welcome whether or not they are members of the Society.

Another matter to be considered at this meeting is an optimum fee schedule drawn in harmony with the resolution of the California Medical Association, which provides that all people are entitled to adequate medical services at prices they can afford to pay.

Norman R. Sullivan, Staffler Building, Santa Cruz; Edith S. Harrison, Stoesser Building, Watsonville; and Fred Harrison, Stoesser Building, Watsonville (by transfer from Placer County) were elected members of the Santa Cruz County Medical Society.



## SONOMA COUNTY

**Sonoma County Medical Society** (reported by N. Juell, president)—At the June meeting of the Sonoma County Medical Society J. Leslie Spear of Santa Rosa was elected to succeed Guy A. Hunt as secretary.

C. O. Sappington delivered a very interesting address on "Periodic Health Examinations—the Technique, Results and Needs."

## CHANGES IN MEMBERSHIP

**New Members**—James P. Warren, Portola; Frederick G. Clark, Taft; Homer M. Barron, Robert L. Belt, O. E. Brendel, George M. Burrall, L. A. Pindler, Gabriel Segall, J. W. Warren, Los Angeles; Mary V. Church, Norwalk; Leo W. Fate, Hawthorne; Edna P. Burgeson, La Habra; Augustus H. Foster, Buena Park; Waldo S. Wehrly, Santa Ana; W. E. McPherson, Loma Linda; W. G. Pitts, Frederick H. Shanks, Oliver E. Thompson, San Francisco; R. A. Buchanan, Lodi; Robert A. Hare, Edward A. Markthaler, Santa Barbara.

**Resigned**—Walter C. Alvarez, San Francisco County; William Harold Wickett, Orange County.

**Transferred**—Orrin S. Cook, from San Francisco County to Sacramento County.

**Deaths**—Bergener, Gustav Julius. Died at Los Altos, May 28, 1926, age 59. Graduate of the Medical College of Indiana, Indianapolis, 1896. Licensed in California in 1910. Doctor Bergener was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Sherk, Henry Howard.** Died at Pasadena, June 15, 1926, age 61. Graduate of Jefferson Medical College, Pennsylvania, 1887, and licensed in California the following year. Doctor Sherk was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Resolution on Commercialized Lectures**—The New York Electrotherapeutic Society has passed resolutions asking the Department of Health of New York to control by license all lectures of various commercial concerns dealing in electrotherapeutic apparatus. The society claims that these public lectures are held solely to advertise the goods of these companies.—Federation Bulletin.

Do not blindly follow dictates that endanger your health, and possibly even your prospective motherhood. Before you roll off or starve off or steam off the "pound of flesh," find out if you ought to "take off" or "put on." And then follow the advice of medical science instead of pinning your faith to a fad!—The Delineator.



## UTAH STATE MEDICAL ASSOCIATION

T. C. GIBSON, M. D., Salt Lake City.....President  
W. R. CALDERWOOD, M. D.,.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GIESY, M. D., Kearns Building, Salt Lake, .....  
*Associate Editor for Utah*

### UTAH STATE MEDICAL ASSOCIATION ANNUAL REPORT

Transactions of the House of Delegates. Thirty-second Annual Meeting, May 6, 7, and 8, 1926, Stewart Hall, University of Utah, Salt Lake City, Utah.

#### FIRST SESSION

Meeting was called to order by the president, T. C. Gibson of Salt Lake City; Frank B. Steele, secretary.

The secretary called the roll of the House of Delegates, there being a quorum present.

The secretary moved that the reading of the minutes of the 1925 meeting be dispensed with, inasmuch as a report of the proceedings was printed in full in the Association's organ, CALIFORNIA AND WESTERN MEDICINE. Seconded by Hampton, and carried unanimously.

The president appointed the following Reference Committee: J. P. Kerby, chairman; M. M. Critchlow, Joseph Jack.

#### REPORT OF THE SECRETARY

By F. B. STEELE

Insofar as the affairs of our Association are concerned, the year has been without unusual incident; no emergencies have arisen. Peace and harmony have prevailed.

With the exception of the passing of one of our past presidents, George E. Robison (February 10, 1926), death has not encroached upon our active membership.

Membership of the Association, tabulated and compared with last year, is as follows:

	Last year	
Boxelder County .....	8	-1
Cache Valley.....	14	0
Carbon County.....	15	0
Salt Lake County.....	218	-6
Uintah County.....	7	-1
Utah County.....	30	-5
Weber County.....	46	+5
	338	-8

This apparent loss in membership is probably due in a great measure to the holding of the annual meeting so early in the year. Some members are remiss in the payment of dues. A goodly number of these will probably come in later in the year. If these members realized how much additional work their negligence entails upon the secretary of their county society, the secretary of the State Association and the office force of the secretary of the A. M. A., I am quite sure they would be more prompt. It is a continuous "take the name off, add the name to" the roll all along the line. The office of the A. M. A. estimates that it costs not less than \$1 per member to reinstate those who have allowed their membership to lapse. While on this subject I would most earnestly bespeak a more cordial co-operation of the secretaries of the component societies. From your reports the report to the A. M. A. is made up, and from the reports of the secretaries of the various state associations is made up the National Directory. May I urge prompt reports giving in full the data asked.

#### FINANCIAL

##### Receipts

From post-graduate course, September, 1925.....	\$ 940.00
From Dr. J. J. Galligan, chairman of Arrangements Committee, proceeds of banquet, September 8, 1925.....	17.45
From secretaries of the component societies, membership dues.....	1704.20

#### Disbursements

Five hundred stamped envelopes, 10/30/25.....	\$ 11.53
Turned over to treasurer.....	2630.12
Balance in hand of secretary.....	20.00

On behalf of the management of the A. M. A., I again bespeak your material support of the magazine "Hygeia." This is a public health journal devoted to individual and community health, and the information is from authentic sources. It seems that less than 15 per cent of the physicians of this state are subscribers.

This Association has not this year attempted any work of a constructive nature. I would most prayerfully suggest for your consideration the two things which seem to be outstanding in the best thought of the profession today: the periodic examination of the apparently well; and contract practice.

#### REPORT OF THE TREASURER

EDWARD D. LeCOMPTE

October 1, 1925, to May 6, 1926

##### Receipts

September 30, 1925, amount in checking account at National Copper Bank.....	\$2,604.84
Delinquent dues for 1925 received from component county societies.....	30.00
Dues from members for the year 1926 received from component county societies as follows:	
Salt Lake County.....	\$1,089.20
Boxelder County.....	40.00
Cache County.....	70.00
Carbon County.....	60.00
Uintah County.....	35.00
Utah County.....	150.00
Weber County.....	210.00
	1,654.20

From the Committee on Post-Graduate Work.....	928.47
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Total receipts for period..... \$2,612.67

Total..... \$5,217.51

##### Disbursements

Expenses incident to the 1925 annual meeting and the post-graduate course:

Entertainment of guests, hotel bills, etc., in Logan, Ogden, and Salt Lake.....	\$419.95
Printing of programs, etc.....	99.45
Stenographic and clerical work, including report of House of Delegates, 1925 meeting.....	139.94
Telegrams.....	3.15
	662.49

Office of the secretary.....	299.82
Office of the treasurer.....	30.01
Office of the editor.....	56.00
Office of the delegate to A. M. A.....	150.00
Gift to Dr. William L. Rich, ex-secretary.....	67.50
Floral bills.....	10.00
Postage and telegrams re the 1926 meeting.....	18.00
Councilors' fees, traveling, etc.....	12.45
	643.78

Total expenditure for period..... 1,306.27

Balance in checking account, May 6, 1926..... \$3,911.24

##### Savings Account

Sept. 30, 1925. Savings Account No. 18,973 in National Copper Bank.....	\$1,451.09
Oct. 1, 1925. Interest on Savings account.....	\$28.83
April 1, 1926. Interest on Savings account.....	29.64
Nov. 16, 1925. Bond coupons.....	6.36
	64.83
Total in savings account.....	\$1,515.92

### Recapitulation

Amount in checking account, National Copper Bank, May 6, 1926.....	\$3,911.24
Amount in savings account, National Copper Bank, May 6, 1926.....	1,515.92
Total in checking and savings account.....	\$5,427.16
I also carry for the Association three bonds of the Second Liberty Loan, with coupons at- tached thereto, Nov. 1, 1926, to Nov. 1, 1942..	300.00
Total assets of Association.....	\$5,727.16

### REPORT OF THE COUNCIL

The following report of the Council was read by the secretary, Doctor Steele:

In accordance with the recommendation of the House of Delegates at its 1925 session, action was taken by the Council during the year on the following matters:

First: An appropriation of \$150 per year was allowed to help defray the expenses of the delegate of the Association to the meeting of the A. M. A.

Second: Fifty dollars per year was allowed the associate editor for office expenses.

Third: The salary of the secretary was made \$250 per year.

Fourth: An Elgin watch, together with a chain and knife, was bought for William L. Rich, former secretary, as a token of our appreciation of the service he rendered the Association during his incumbency.

During the year it was decided that additional stenographic work was necessary at times and \$10 per month was appropriated for the use of the officers for this work.

The A. M. A. has been desirous of having more uniformity in the Constitution and By-Laws of the state societies, and sent a copy of proposed constitution and by-laws for our approval. After close consideration we have decided the Constitution and By-Laws submitted by the A. M. A. (with some necessary changes to fit our particular needs) would be an advantage to the Utah State Medical Association; and are therefore submitting to the House of Delegates at this session for its consideration this new constitution and by-laws, with the recommendation from the Council that it be adopted.

The Council believes that in the selection of a president of our Association that too much stress be not laid on the necessity of electing a president because of geographical reasons, but to elect for president the man who is likely to prove to be the best man available at the time, regardless of where he lives, thus giving the Association the strongest man possible for president each year.

President Gibson stated that in line with the report of the Council the new constitution and by-laws which was to have been presented at this meeting, could not be presented, owing to a series of accidents, until the meeting of the Association next year.

### REPORT OF DELEGATE TO A. M. A.

E. M. NEHER

The A. M. A. House of Delegates was called to order by Speaker Frederick C. Warnshuis, who presided with his usual dignity, this being the fifth time he has served so efficiently as chairman. After the report of the Credential Committee, Speaker Warnshuis delivered his address. He stressed the importance of our position as delegates, urging us in all cases to place the collective good above individual and selfish greed. He praised the Board of Trustees for their untiring efforts and great sacrifice of time for the good of the Association. He further stated that the House of Delegates had at former meetings clearly defined their position with reference to state medicine, contract practice and group practice. Notwithstanding this action, there are evidences in many communities of tendencies toward rapidly growing development of these types of practice. He suggested that some type of disciplinary measures be passed for the benefit of the offenders. At the conclusion of his address, the speaker announced the appointment of the Reference Committee. Your Association has honored your delegate, being appointed a member of the Committee of Rules and Order of Business.

President William D. Faggard addressed the House of

Delegates on the topic of "Periodic Health Examinations." He stressed its importance as one of the greatest preventive medicine measures in early detection of precancerous lesions and insidious diseases of the vital organs. The physician really comes into his own as a true adviser of the social, mental and physical welfare of his patients. He made several pertinent suggestions as to how we should promote and encourage periodic health examinations, as follows:

1. Each physician should have in his waiting-room blanks for the physical examination, including the history which should be filled in by the patient. A suitable placard should be placed over the blanks, stating "Regular physical examinations promote better health and longer life." A sample blank is submitted herewith. Also, "The Manual of Suggestions for the Conduct of Periodic Examinations of Apparently Healthy Persons" should be in the hands of every physician. A copy is submitted herewith. In several states these copies have been purchased from the A. M. A. and presented to each member.

The president further suggested that the importance of periodic health examinations should be stressed in our local societies and state associations, and popularized through such lay organizations as churches, women's clubs, lodges, and the press. *There can be no objection to sending a notice through the mail notifying your patients when it is time to return for subsequent examinations.*

President-elect Wendell C. Phillips gave an interesting address extolling the achievements of the medical profession since the great war, and pointing to the fact that the members of the A. M. A. are the leaders today in world medicine.

The report of Secretary Olin West brought out some interesting facts, as follows: On March 1, 1926, the membership numbered 91,729, the largest in the history of the organization. However, the ninth Medical Directory lists nearly 150,000 doctors in the United States, and 505 physicians in our state, with only 357 as members of the State Association. Here is an opportunity for us to do missionary work and secure a greater membership. The Board of Trustees reported the gross earnings of the publication of the Journal as \$1,222,000 with a net profit of \$411,000. The advertising department was responsible for \$680,000 of the income.

The circulation of "Hygeia" has increased from 30,000 copies last year to over 40,000 copies this year. However, this Journal is still published at a loss of over \$5,000, which compares favorably with a loss of over \$40,000 the previous year. It is interesting and yet chagrining to note that only seventy physicians of our state are subscribers to "Hygeia."

Several resolutions were introduced at the House of Delegates. The principal ones follow:

A resolution asking the Board of Trustees to investigate all phases of contract practice, and report with recommendations at the meeting next year.

A resolution recognizing the frequent evil of expert testimony in insanity cases, and asking the Board of Trustees to take the necessary steps to correct same.

A resolution requesting that medical students be permitted to receive credit for summer work and thus shorten their medical course.

A resolution asking the Board of Trustees to investigate the entire nursing question, with a view of increasing the nurses in each state.

The following officers were elected: Jabez N. Jackson of Kansas City was unanimously elected as president-elect. John O. McReynolds of Dallas, Texas, was chosen vice-president. Warnshuis was again unanimously chosen as Speaker of the House, and Olin West as secretary of the Association. Washington, D. C., was chosen as the meeting place next year.

Only a little over 4000 members were registered at the meeting, and of this number nearly 3000 were attending the meeting of the A. M. A. for the first time.

We cannot be too loud in our praise of the southern hospitality extended us. This, coupled with the splendid exhibits and the interesting scientific sessions, made the meeting a most pleasant and profitable one.



## REPORT OF COMMITTEE ON SCIENTIFIC WORK

C. L. SHIELDS, *Chairman*

This committee has had several meetings separately, and several with the president and the Council, at the last of which the dates for the annual meeting of the Society were set for May 6, 7, and 8.

Leading physicians were communicated with by mail and telegraph, with the result that we have presented to the Society a very fine list of speakers. The following have consented to come: H. Gideon Wells, Edmund Jacobson, Leo P. Bell, Robert Coffey, Roger S. Hubbard, J. P. Pratt, Charles C. Tiffin, E. P. Sloan, A. J. Carlson.

In our opinion this should be one of the finest educational opportunities ever afforded Utah medical men.

## COMMITTEE ON EDUCATION AND POST-GRADUATE WORK

GEORGE F. ROBERTS, *Chairman*

Your committee on post-graduate work decided to eliminate from the state meeting the post-graduate work and have two separate and distinct meetings. The post-graduate work will probably be given in September; the exact date has not yet been set. Our program has not been definitely settled. We have a partial promise of Doctor Lilienthal, chairman of medicine at Columbia University, New York. C. H. Mayo is giving us a partial promise that he will be here. It is our plan to have just two men, one in medicine and one in surgery, and conduct the clinic probably in the early part of September.

Committee on Health and Public Instruction, Advisory Committee on Hospitals, and Committee on Professional Welfare and Ethics did not submit reports.

## COMMITTEE ON NECROLOGY

T. A. FLOOD, *Chairman*

The death rate among members of this Association during the past twelve months has been materially less than in former years.

George Edgar Robison, born at Fillmore, Utah, August 3, 1869, the son of Joseph V. and Martha Jane (Olmstead) Robison, died of pneumonia on February 10, 1926, following an injury consisting of a compound fracture of the humerus, and internal injuries causing gastric hemorrhage incident to a fall two weeks previously. Funeral services were held at his former residence in Provo, Utah, under the auspices of the Masonic Order, Story Lodge No. 4, of which he was a member. He was recognized as a capable physician and surgeon in this community and in Provo, his former residence, and having specialized in roentgenology he became prominent in his chosen field of work.

Doctor Robison received his preliminary education in this state and then attended the College of Physicians and Surgeons of Baltimore, from which school he was graduated with honors. From 1893 to 1901 Doctor Robison was associated in the practice of medicine at Provo with Dr. S. H. Allen, who later took up his residence in this city. While living at Provo, Doctor Robison had held the position of city physician and also county physician of Utah County, and was one of the founders of the Provo General Hospital. In May, 1891, Doctor Robison married Miss Ella Smoot, daughter of the late A. O. and Diana Eldredge Smoot. He taught in the public schools of Provo until 1894, when he took up the study of medicine. Mrs. Robison died in October, 1916. Several years later Doctor Robison married Miss Nellie Jones of Kansas City who survives him, the other surviving members of the family being two sons by his first marriage, namely, Dr. Arnold Robison and Joseph S. Robison, both of Provo.

Doctor Robison was a member of the Radiographical Society of North America, and the first district counselor of the Society for Utah and the surrounding states. He was also a member of the Salt Lake County Medical Society, the American Medical Association, and the Utah State Medical Association, of which he was president from 1919 to 1920.

Dr. Harvey Coe Hullinger, born in Ohio, December 2, 1824, died at the age of 102 on January 29, 1926, at Vernal, Utah, the oldest practicing physician in the state

of Utah and probably also the oldest resident of Utah. He was graduated from a medical college in Columbus, Ohio, in 1852. Funeral services were held at his residence, with Witbeck Post No. 11 acting as guard of honor. A squad of World War veterans fired a salute over his grave, as Doctor Hullinger had been one of the first to answer Lincoln's call for volunteers in 1861.

After the Civil War, Doctor Hullinger established his residence in Big Cottonwood, where he also resumed the practice of medicine. Later he moved to southern Utah, and in 1883 took up his residence in the Uintah Basin, where he lived until his death, a period of forty years.

The following reported deaths were rather meager in detail, owing to the fact that these physicians had been more or less out of touch with the profession for some time prior to their death:

Dr. Charles P. Hough died at the age of 81 in Missouri. Doctor Hough was a resident of this city for six years. In 1902 he returned to his home town, Jefferson City, Missouri.

Dr. Alexander William Shields died recently at Huntsville. Doctor Shields practiced in Ogden for a period of fourteen years.

## ADVISORY COMMITTEE TO STATE INDUSTRIAL COMMISSION

RALPH C. PENDLETON, *Chairman*

Inasmuch as all types of injuries and many complex problems and situations confront each new committee; and

Inasmuch as we find that many doctors over the state and in Salt Lake City do not understand some phases of the present Industrial Law; that many of the records before the Commission and your committee are incomplete; that some cases have been incompletely treated and in some cases it was felt that further consultation might have aided the patient; that at times claims of excessive charges on the part of physicians come unnecessarily before your committee to be passed upon; that where cases come up months and even years after treatment by the original attending physician, and on account of incomplete records and reports, conflicting statements of patients and friends, a lack of inability in the short time afforded us properly to learn details of co-operation on the part of the patient, difficulties of handling a case, mentality of patient and other systemic conditions affecting the patient, we are handicapped in giving the best advice without these details being furnished.

We therefore make the following suggestions, some of which have been put into effect already and many of which doubtless have been made by previous committees:

That any doctor doing industrial work familiarize himself with all provisions of the present Utah Industrial Law.

That where possible and convenient each injured man be allowed to choose his own medical attention.

That where there is any doubt as to the diagnosis or treatment that consultants be called in just as we do with other patients. In each case the insurance carrier should be given due notification.

That where there is a major or prolonged injury, supplemental reports be made to the insurance carrier at frequent intervals as provided by law.

That where healing is retarded by the presence of foci of infection, such as teeth, or tonsils, such be cleared up, even though they existed prior to the injury. In each case this should be done after a full understanding is arrived at with the insurance carrier.

That in case of claims of excessive or nonlisted fees, every effort be made for the attending physician and carrier to arrive at a fair settlement, so that your Medical Advisory Committee will be called upon to arbitrate only such bills as the carrier and physician cannot agree upon.

That all reports, including preliminary, supplemental and final reports, be made in triplicate so that the Industrial Commission, the insurance company, and yourselves may each have a written record for future reference.

That in case of extraordinary care or unusual circumstances, a full written report of such be made upon the final report blank in the space provided.

That a final report be not sent in until all the conditions are surgically healed or the patient's condition fixed.

That in no case should the Medical Advisory Committee be used as a free consultation board, but that where there is a question of diagnosis, further operative procedures, massage or care, that competent consultation be procured (again, after conferring with the carrier). And only in case where the Industrial Commission cannot order certain procedures to be carried out because of lack of their own medical knowledge or of disagreement among consultants; that the Medical Advisory Committee then advise them what further operative treatment or care they should select.

That members of your committee also advise the Industrial Commission what per cent of permanent disability is present or whether any disability is present, so that the Commission can make accurate and fair awards.

That new members of your Advisory Committee be made familiar with these few well understood facts so that they can better perform their duties.

Recently there has been instituted a system of appointing one new member every two months to serve for a period of six months. This gives the Commission, the medical profession, and the injured man a committee which constantly consists of two experienced men, and we feel that this rotating committee will enable them to give more fair and more accurate advice to the Industrial Commission.

The members of the Industrial Commission wish us to thank the members of the medical profession for their splendid part in past years in enabling them by their advice to carry out fairly and intelligently the provisions in the Act.

On the whole we feel that the Act as it now functions is a splendid means of handling the many claims and disputes arising out of the accidents which happen in industry.

Meetings are held every Friday at 11 o'clock a. m., and we take this opportunity to invite any members of the State Association to attend these meetings when convenient and learn at close hand the above mentioned problems with which we have to deal.

#### ADVISORY COMMITTEE TO THE MEDICAL DEPARTMENT, UNIVERSITY OF UTAH

F. A. GOELTZ, *Chairman*

A majority of the committee visited the university on April 28, 1926. The building and equipment were inspected and several improvements were noted. The library, while not complete, has been enlarged.

The department of gross anatomy has been improved by the addition of models, charts, complete sets of bones, dissected specimens, microtome, microprojector, and other laboratory equipments, and the installation of a compressed air system for the demonstration of fascial layers and the inflation of hollow organs. The department of microscopical anatomy has been supplied with sufficient microscopes, so that every student has one; the course of study is ample.

The pathological department is still in need of better facilities for the preservation and demonstration of gross specimens. Fresh operative specimens are received daily from the hospitals of the city. These are sufficient in number and variety, so that each day the students receive instructions and have the opportunity to study conditions just as they appear at the operation.

The improvements on the fourth floor of the medical building have been completed. Proper rooms for the care and observation of animals, an animal operating-room, rooms for experimental pharmacology and physiology and pharmacology laboratories equipped with hot and cold water, electricity, gas and compressed air and special dissecting rooms have been provided.

A study of the curriculum shows that three years instead of the average two years of pre-medical work is required; that the required amount of lecture, classroom and laboratory hours be equal to that of the best schools in the country.

We are glad to see four graduate practitioners availing themselves of the opportunity afforded by the university of doing some special work and study in anatomy and dissecting a cadaver. This opportunity should be brought

to the attention of our members and they be informed that the medical faculty is prepared in equipment and personnel, and are more than willing to help us in our problems in review and research.

We suggest that as soon as practicable that none but medical classes and instruction be given in the medical building, and that when members of the medical faculty lecture or give instruction to nonmedical students that this be done in other buildings.

We find there is need of additional equipment and personnel in the various departments; that the heads of these departments recognize this fact, but are of necessity limited by the amount of money appropriated by the legislature for the university.

The suggestions and recommendations that we make are impossible until such time as the legislature realizes the growing demand on the university in all its departments; that the university finds itself hampered and embarrassed to carry on its work until it is provided with sufficient funds for new buildings, equipment, and personnel.

Therefore we suggest that our association, representing the medical profession of the state, and desiring that the medical school be placed on the highest standard, recognize our obligation as citizens, and that we go on record to do all in our power to help the university authorities to secure adequate appropriations, and to attain this end we recommend that the House of Delegates take suitable action to enlarge the duties and powers of the Advisory Committee, that they be instructed to co-operate with the university and other professional and lay organizations and our committee on public health and legislation, and to appear before the legislature to present the needs, particularly of the medical school, and also the entire university.

We thank the members of the faculty for their courtesy and frankness in discussing the needs and improvements in their department, and feel that they should be commended for the work they are doing. R. O. Porter, dean of the school, by his work, study, and interest, has brought the school to a high standard. Hampered by the lack of funds, he has done a splendid work in bringing about a very marked improvement.

The Faculty now consists of seven full-time professors and instructors and two part-time.

**Revision of the Constitution**—Joseph R. Morrell, chairman, reported that President Gibson had reported on the proposed changes in the constitution; that it would have to be taken up at the next meeting.

**Miscellaneous or New Business**—The following communication from former secretary William L. Rich was read by the secretary:

"I wish to acknowledge the gift of a watch, chain, and knife, with appropriate engraving, from the Utah State Medical Association.

Please convey to the Council and House of Delegates my heartiest thanks for the same.

I shall always feel grateful for the profitable and ungrudging aid given me as secretary by members, various committeemen and officers."

The secretary stated that there had been received during the year numerous communications of questionable importance: several from Doctor Woodward's office regarding the amendment of the Narcotic Act, several with reference to the Veterans' Bureau, announcement of the American Legion regarding their meeting in Paris in 1927, several regarding cancer research; that the communications ran from one to twelve pages, and would take a considerable time to read to the House of Delegates. He followed his statement with a motion that they be not read at this meeting; but that anything of importance contained therein be taken up by the Council, and the others be received and filed. Motion seconded and carried unanimously.

E. M. Neher made the following brief statement, following it with motion which follows:

"I believe the members of our Association have not been paying enough attention to periodic health examinations and, as expressed by President Haggard at the A. M. A. meeting, the doctors are the first men that ought to be examined, and they are the ones who are really being neglected. The doctors could help one another."



other materially by examining each other. I move you, Mr. President, the adoption of the following resolution:

#### Resolution

WHEREAS, The American Medical Association realizes the great value of periodic health examination as one of the best means of preventive medicine; and

WHEREAS, The National Bureau of Health and Public Instruction have issued a splendid pamphlet giving suggestions for making such examinations, be it

RESOLVED, (1) that our secretary be instructed to purchase a sufficient number of copies of said "Manual of Suggestions for the Conduct of Periodic Health Examinations of Apparently Healthy Persons," and send one copy to each member of our Association; (2) that our Committee of Health and Public Instruction devise the best way and use the proper means to popularize periodic health examinations with the profession and with the laity; and furthermore be it

RESOLVED, That they make a report of their work at the meeting of the House of Delegates next year.

(Signed) E. M. NEHER

E. F. ROOT

HELMINA JEIDELL

Committee on Health and Public Instruction.

President Gibson announced that the resolution would be handed to the Reference Committee with the reports, and would be referred to the House of Delegates at the time the Reference Committee made its report.

Doctor Flood: If not out of order at this time, I should like to bring up the matter of compensation for the treasurer. I think very few of you realize just the amount of work connected with the treasurer's job. There is considerable correspondence attached to it, and practically every day a trip to the bank, etc. I think the very least we should pay the treasurer is \$5 a month, and that the treasurer's compensation should be raised to \$50 a year. I move that the House of Delegates recommend to the Council that the treasurer be paid \$50 a year. Seconded and carried. Doctor LeCompte, the treasurer, asked what was to be done with the proceeds from the post-graduate work. Doctor Kahn stated this should be handled by the Reference Committee, and could be discussed at the time they made their report.

#### SECOND SESSION

House of Delegates met in adjourned session at 5 o'clock p. m. on Thursday, May 6, President Gibson presiding, Doctor Steele secretary. Roll call showed full quorum present.

The president announced that the first order of business would be the giving of reports not given at the noon meeting. That the first report would be that of the Committee on Public Policy and Legislation, John Z. Brown, chairman:

At the last session of the Utah State Medical Association the House of Delegates ordered its Committee on Public Policy and Legislation to confer with Senator Reed Smoot, who is chairman of the Finance Committee of the Senate, regarding the reduction of the Harrison Narcotic Tax from \$3 to \$1, and also ask for a change in the revenue law, which will permit physicians to deduct from their income tax reports the expense they have to meet in attending medical conventions and undertaking post-graduate work.

A meeting was arranged with Senator Smoot at which the above matters were considered. The Senator stated that he favors the reduction of the Harrison Narcotic Tax from \$3 to \$1, but does not see how the second proposition could be included in the revenue law. He said, however, that a clause might be inserted which would favor those physicians of limited income, say up to \$2500 per year. The Senator further said that he would confer with Secretary Mellon of the Treasury Department and see what could be done before final action is taken.

The committee promptly reported the proceedings of this conference with Senator Smoot to Dr. William C. Woodward, secretary of the Bureau of Legal Medicine and Legislation of the A. M. A. at Chicago, under whose immediate direction we continued our efforts during the

time Congress had under consideration the present revenue law.

In October Doctor Woodward and his committee went down to Washington and met with Chairman Green and the members of the Ways and Means Committee of the House of Representatives as well as with the Finance Committee of the Senate.

While this was going on, Sol G. Kahn received the following letter from Earl C. Sage, M. D., Omaha, Nebraska:

"We are reliably informed from Washington that your Senator Smoot is the person who is largely responsible for the present injustice done to the medical profession by not allowing them to deduct their expenses for attendance to medical societies, entertaining medical societies, attendance to domestic and foreign clinics, from their income tax. Will you kindly take this matter up with your society and bring such pressure on the Senator that he will change his attitude in this matter in order that justice may be done to the physicians."

A copy of this letter, together with copies of our correspondence with A. M. A. headquarters in Chicago, were sent to Senator Smoot at Washington, who on January 12 wrote us as follows:

"I am in receipt of your note of January 6, 1926, in which you enclose copies of letters, one to Dr. William C. Woodward, Chicago, Illinois, a letter from Dr. Earl C. Sage to Dr. S. G. Kahn, and a letter to Dr. Earl C. Sage, Omaha, Nebraska, signed by yourself.

Answering your note, will state that the Senate Finance Committee today approved of the reduction of the narcotic tax from \$3 to \$1, but no final action was taken upon permitting physicians to deduct from their income tax reports the expense they have to meet in attending medical conventions and undertaking post-graduate work.

I brought up the question of allowing the deduction to physicians whose income does not exceed \$2500 per year. A number of the committee desired time to think over the proposition, and so the question of allowing the exemption held over for tomorrow or the next day."

Olin West, secretary of the A. M. A., also wrote:

"I am very grateful to you for your kindness in sending me copies of letters addressed by you to Doctor Woodward and Doctor Sage, and a copy of a letter addressed to Doctor Kahn by Dr. Earl C. Sage.

I am afraid that Doctor Sage was not quite as well informed as he might have been before he wrote his letter to Doctor Kahn. As you know, the Bureau of Legal Medicine and Legislation of the American Medical Association has been working persistently and earnestly on these matters of federal taxes. We have already received assurances that support will be given to the proposal to reduce the taxes levied under the Harrison Narcotic Act. We have not yet any definite basis for hope that income tax deductions of the kind referred to in your letter will be made possible during the present session of Congress. It is our purpose, however, to continue to hammer on this matter with the hope that we will finally win."

Also the following letter was received from Doctor West:

"I am very greatly obliged to you for your kindness in sending me a copy of the letter you received from Senator Smoot. Somehow I get the impression that Mr. Smoot is not very greatly interested in matters which affect the medical profession, but certainly his letter to you indicates that he is quite willing to give careful consideration to such matters as are presented to him by you and other Utah physicians.

You may depend on it that we are not going to let up on this proposition. It looks like it will be a long hard fight and it may be that we will lose in the end, but nevertheless we propose to keep on trying. The only suggestion that I can offer is that Utah physicians shall follow the same method of procedure."

The result of the efforts of the profession has been the reduction of the Harrison Narcotic Tax from \$3 to \$1.

Your committee has been gratified with the present tendency toward decentralizing our government activities, permitting the states to more definitely regulate their own affairs. Chief among these working to this end are Secretary Hoover and President Coolidge.

The Collector of Internal Revenue was asked how much money went from Utah taxes in support of the Government last year, and he said that income tax and inheritance taxes amounted to a little over \$3,000,000. At the time the war was on we used to pay \$10,000,000 to the United States Government, but it has been gradually reduced. Two years ago we paid \$4,000,000, and this last year it was \$3,000,000. The State Road Commission said last year they spent \$2,000,000 on roads under the

Sheppard-Towner Bill \$1,208,726.04 from the state, matched against \$1,208,726.04 from the Government—a fifty-fifty proposition. The nation says they will dig up 50 per cent if we will dig up 50 per cent. Where does Uncle Sam get this money? Why, from us, of course. And leading statesmen think the Government has gone too far in regulating state matters.

Another feature is the work of the Committee on Public Health and Legislation of the Salt Lake County Medical Society. At a meeting in December a resolution was adopted asking the committee to investigate the Utah Public Health Association. This at the request of the Utah Public Health Association itself. The committee worked on this proposition for several months. They had not gone very far until they found that they would have to go beyond Salt Lake County in their investigation. Letters were sent both East and West, both to the secretaries of the State Boards of Health and also to the secretaries of the Anti-Tuberculosis Associations, and the committee gained a lot of information. In a great many instances they found there was friction between the voluntary health organization and the regular state organization. This condition obtains in this state today. The Salt Lake County Medical Society adopted the report of the committee (a copy of the entire report being made a part of this report by our committee), and I desire to read the closing paragraph of that report to you, inasmuch as it would take too much time to read the entire report, which is quite lengthy.

This report is too long to publish, and was abstracted in the June issue of California and Western Medicine.—Editor.

The two paragraphs of this report recommended to the House of Delegates for adoption read:

*We, your committee, recognize the value of volunteer health organization work and are not disposed to discourage it as such. We recommend that all voluntary health organizations in this state should be supplementary to the legally constituted State Board of Health and that they should work in co-operation with and under the direction of the State Board of Health; that the funds which they receive through the sale of seals or other sources should supplement the funds appropriated for health work by the state legislature.*

*Until such time as this can be consummated, we recommend that the medical profession withhold their moral and financial support to any and all volunteer health agencies.*

Chairman Calonge added to the report of the Committee on Professional Welfare and Ethics the following complaint by Dr. Roy Groesbeck:

"Friday, April 30, 1926, Mr. D. D. Meacham, an industrial case from Hanksville, Utah, came to my office, complaining of a swelling in the right groin, which was a right inguinal hernia, and which he claimed to have been acquired in January under his present employer. No report of the case had been made, and he came without a report from his employer. He desired an operation, but did not want it done unless compensation was granted.

I called Mr. Caine of the State Insurance Fund on the telephone, and he had me send Mr. Meacham to the Commission at 10 a. m. Saturday, May 1, 1926. I told Mr. Meacham that my office hours on Saturday were from 11 to 1 o'clock, and asked him to return to my office immediately following the Commission's decision.

He did not return, and at 1 o'clock I talked to Mr. Iverson, who said the case had been passed upon and granted operation. Mr. Meacham did not return to my office.

Tuesday, May 4, I learned Mr. Meacham was in the L. D. S. Hospital scheduled for operation. I visited him in the ward at the hospital and asked him how he had arrived at the hospital under other care. His words were that he had been given a card to the Salt Lake Clinic and advised to see Dr. R. T. Richards. He also stated that he had the card in his pocket in the locker, and if I would get it he would show it to me.

I have that same card in my possession bearing this instruction to the Salt Lake Clinic, their address, and their names in part.

The same morning, May 4, I met Dr. J. E. Tyree, who was scheduled to do the operation, and told him the facts as I have presented them to you above, and asked him what was his opinion.

Doctor Tyree claimed that he did not know that I had seen the case, but said that had he known, it probably would not have made any difference; that he would have gone ahead and operated anyway.

The object of this complaint is:

1. Under what statutes does the State Insurance Fund and the State Industrial Commission advise who should operate?

2. Knowing the facts as I presented them to Dr. J. E. Tyree, under what code of ethics does he feel obligated to operate?"

President Gibson ruled that this report be handed to Chairman Kerby of the Reference Committee and that it be included as part of the report of the Committee on Professional Welfare and Ethics.

### THIRD SESSION

Friday, May 7, 1926

Roll call of delegates: quorum present. Moved by Neher that Bash be seated as delegate from Carbon County, inasmuch as the regular delegate was not present.

Kahn moved that all the alternates present from Salt Lake County be seated as delegates, inasmuch as there were more regularly appointed delegates absent than there were alternates present. Seconded and carried. Moved by Calderwood, seconded by Hampton, that Aird, the alternate from Utah County, be seated as a regular delegate. Carried.

### REPORT OF REFERENCE COMMITTEE

J. P. KERBY, *Chairman*

Your Reference Committee has held two meetings, at which the communications referred to it were considered.

It is the belief of the committee that when the post-graduate fund was started it was the intent that the net receipts from each year should accumulate in a separate fund, the Post-Graduate Fund.

Your committee recommends that the treasurer's report be prepared in such a way as to show the total amount in the Post-Graduate Fund, and that the net proceeds of each year's post-graduate work be added to this fund, including the \$928.47 from last year's fund. It is recommended also that the expenses of the post-graduate work of 1925 be paid out of this fund.

We recommend the adoption of the report of the secretary.

We recommend the adoption of the report of the Council, with the exception of that part relating to the proposed change in the Constitution and By-Laws, and that this part of the report be considered by the House of Delegates after it has had an opportunity to hear the proposed revisions.

We recommend adoption of the report of the delegate to the A. M. A. and of the resolution presented by him.

We recommend the resolution of Dr. T. A. Flood to increase the salary of the treasurer to \$50, and recommend that it be forwarded to the Council requesting favorable action thereon.

We recommend that the House of Delegates adopt the recommendations of the Advisory Committee on the Medical Department of the University of Utah.

In order that closer co-operation may exist between this committee and the Committee on Public Policy and Legislation, we recommend that the chairman of the latter committee be as officio a member of the Advisory Committee on the Medical Department of the University of Utah.

We recommend that the report of the Committee on Scientific Work be accepted and a vote of thanks extended to the committee.

We recommend the adoption of the report of the Conference Committee of the Industrial Commission. In this connection it is recommended that the secretary of the State Association be directed to request the State Industrial Commission to furnish a copy of the law relating to industrial cases, and of the approved fee schedule to each doctor in the state.

We recommend the filing of the report of the Committee on Public Welfare and Ethics.

We recommend the acceptance of the report of the Committee on Necrology, and that appropriate resolutions be sent to the families of the deceased members.

We recommend that the report of the treasurer be accepted.

The committee considered the communication of Roy



Groesbeck in regard to certain practice of the State Industrial Commission and the allegation of unethical conduct on the part of a member of the Association. It is the opinion of the committee that Groesbeck should take up the matter of unethical conduct with the Salt Lake County Medical Society. It is contemplated that a resolution will be introduced in the House of Delegates at this meeting that will attempt to prevent the occurrence of such a practice as is the foundation of Groesbeck's complaint.

We recommend the adoption of the report of the Public Policy and Legislation Committee.

The committee has considered the complete report of the Committee on Public Health and Legislation of the Salt Lake County Medical Society and, while it does not feel at liberty to recommend the adoption of the entire report because of the limited opportunity for analysis of it, it does concur in the recommendations in the two final paragraphs and recommends the adoption of these two paragraphs.

The committee further recommends that your Committee on Public Policy and Legislation be directed to initiate the necessary measures for securing full co-operation between the State Board of Health and all volunteer health organizations.

We recommend that the report on post-graduate instruction be accepted and filed.

Moved by John Z. Brown, seconded by J. C. Landenberger, that the report of the Reference Committee be adopted.

Kahn moved a substitute for Brown's motion, that we take the report of the Reference Committee up *seriatim*. Seconded by E. F. Root.

After further discussion, President Gibson announced that Kahn's substitute motion that we take the report of the Reference Committee up *seriatim* was before the House. Motion voted on and lost.

President Gibson then called up the original motion that we accept the report of the Reference Committee which, after further discussion, was adopted.

Kerby: For some time a number of men have complained about the practice they claim exists in the relations of the doctors and the Industrial Commission. They claim that their patients are referred to specialists—eye and ear specialists—for examination without their knowledge and that in many cases the patients are operated on without their knowledge, and the Advisory Committee to the Industrial Commission has realized that in some cases there was possibly a just reason for some of these practices. Doctor Pendleton, as chairman of this committee, has in mind attempting to overcome this practice, and I should like to introduce a resolution that covers this matter, inasmuch as it is referred to in the paragraph of the report of the Reference Committee wherein Doctor Groesbeck's letter is embodied.

#### RESOLUTION

It is the opinion of the House of Delegates of the Utah State Medical Association that whenever an insurance carrier desires other medical attention or advice than that of the attending physician, such consultation should be secured by the attending physicians, and that the practice of referring compensation cases to other physicians than the one in attendance without his knowledge, should be discontinued.

Upon motion by G. F. Roberts, seconded by L. J. Paul, the resolution was adopted.

After considerable discussion about funds, Roberts moved that hereafter when the state meeting and the post-graduate course come together the state funds pay the bill; that when they come separate the funds of the post-graduate course come out of the post-graduate fund. Motion seconded by John Z. Brown.

Following full and free discussion, the motion was carried. Meeting adjourned.

#### FOURTH SESSION

Roll call; quorum present.

Moved by Kahn that Beer be seated as a delegate from Salt Lake County Society. Seconded and carried unanimously.

President announced that the first order of business would be the election.

**President-Elect**—E. I. Rich of Ogden nominated E. H. Smith of Ogden. Seconded by R. R. Hampton. E. F.

Root nominated E. M. Conroy of Ogden. Seconded by W. F. Beer. F. F. Fisk of Price nominated by Bash.

Hampton moved that inasmuch as it takes a majority to elect, that the three names be balloted on and the lowest candidate be dropped on the second ballot. Motion seconded and carried. This was done, with the final result that Smith of Ogden was elected president-elect.

Conroy moved that the vote for Smith as president-elect be made unanimous. Seconded by Bash and unanimously carried.

Frank K. Bartlett of Ogden moved that Conroy be first vice-president. Seconded by Beer.

Moved by F. H. Raley that the rules be suspended and that Bartlett be elected as first vice-president by unanimous vote. Seconded and carried.

Unanimous vote of the House was cast for E. M. Conroy as first vice-president, whereupon the president announced that E. H. Smith of Ogden was elected president-elect, and E. M. Conroy as first vice-president.

**Second Vice-President**—F. F. Fisk of Price was nominated by R. A. Pearse of Brigham City. Seconded by W. F. Beer.

Joseph Jack moved that the rules be suspended and that Doctor Fisk be elected as second vice-president by unanimous vote of the House. Seconded and carried, and the secretary cast the unanimous vote of the House for Fisk. The president thereupon announced that Fisk would serve as second vice-president during the next year.

**Third Vice-President**—R. A. Pearse of Brigham City nominated by Homer Rich. Seconded by E. M. Neher. Moved by Kahn that the rules be suspended and that Pearse be elected by unanimous vote of the House. Seconded and carried, and the secretary cast the vote of the House for R. A. Pearse for third vice-president. Whereupon the president announced that R. A. Pearse would serve the Association as third vice-president for the coming year.

**Treasurer**—E. D. LeCompte, the present treasurer, was nominated by George F. Roberts. Seconded. Beer moved that the unanimous vote of the House be cast for LeCompte for treasurer. This was done, and the secretary cast the unanimous vote for LeCompte; whereupon President Gibson announced that LeCompte would continue as treasurer.

**Councilor for the First District**—Three-year term. President Gibson announced that Smith, the councilor from the First District, had left the state and that Morrell had been appointed by the Council to fill the unexpired term; that Morrell was now filling the office and that his term would soon expire.

Bartlett of Ogden nominated Whitlock of Layton. Seconded.

E. I. Rich of Ogden nominated R. A. Pearse. Seconded. Matter was brought up of a man holding two offices, inasmuch as R. A. Pearse had just been elected as third vice-president.

Joseph R. Morrell nominated by William L. Rich. Seconded.

President ruled that Pearse could not hold two offices, and Pearse asked that his name be withdrawn. Ballot was taken on Morrell and Whitlock, with the result that Morrell was elected. President Gibson thereupon announced that Morrell would serve as councilor from the First District for the coming three years.

**Delegate to A. M. A.**—Neher nominated Kahn; seconded. Kahn nominated Neher; seconded. Kahn withdrew. Neher asked that his name be withdrawn. Root nominated by Roberts. Root asked that his name be withdrawn in favor of Doctor Neher. Beer moved that nominations close and the secretary be instructed to cast the vote of the House for Neher. Seconded and carried, and the secretary thereupon announced that E. M. Neher was elected as delegate to the A. M. A.

**Alternate Delegate**—Roberts nominated Root; seconded. Neher nominated Kahn; seconded. Kahn withdrew his name, and Beer moved that the secretary be instructed to cast the ballot for Root as alternate delegate. Seconded and carried. Whereupon the president announced that Root would serve as alternate delegate to the A. M. A.

**Selection of Place of Meeting**—Landenberger moved

that the next yearly meeting be held in Salt Lake City because the Salt Lake man holds the presidency. Seconded and carried.

Rich moved that all members of the House of Delegates receive copies of all the reports thirty days before the meeting. Seconded by M. M. Critchlow.

Kirtley moved an amendment to Rich's motion by inserting fifteen days instead of thirty. Seconded by Neher, accepted by Rich.

Kahn offered a substitute motion that we follow the rule of having committee reports read to the House of Delegates and instead of having a Reference Committee that they be passed upon by the House, and see how it works out. Then when we get our new Constitution and By-Laws, if we desire to make a change we can do so. Motion seconded and carried.

The following letter from the Auxiliary Salt Lake County Medical Society was read by the secretary:

"In response to a request from a number of the ladies of our auxiliary organization, we are sending this communication, hoping that some action will be taken regarding it.

Two years ago, upon request of Dr. J. C. Landenberger, a few of the doctors' wives met together and organized what is now known as the Auxiliary to the Salt Lake County Medical Society. The name seemed to be the only logical one, as the organization effected comprised only Salt Lake County membership.

It has been reported that our Utah organization has no listing in the National Auxiliary Association. We shall esteem it a favor if the State or County Medical Association will take some action relative to the status of the women's organization in order that we may have a place in the national program, and also because we have been calling ourselves an 'Auxiliary' to the Salt Lake County Medical Association. A delegate from the national organization is expected in Salt Lake City about next September to assist in further organization."

After extended discussion, a motion was made and carried that the communication be handed to the Salt Lake County Medical Society to be acted upon, and that all the other county societies be included in forming a state organization.

On motion, duly seconded and carried, meeting adjourned *sine die*.

#### Ankylosing Operations on the Tuberculous Spine—

As a basis for his study, Leonard W. Ely, San Francisco (Journal A. M. A.), has collected the histories of the patients with tuberculous spines who were operated on in the orthopedic clinic of Stanford University during the last twelve years, and to them has added the histories of his private patients. There are those who think that they can cure spinal tuberculosis by exposing their patients to sunlight. Until about twenty years ago the nonoperative treatment, by plaster of paris, by braces and by frames in recumbency, was practiced almost universally by those who treated many cases of spinal tuberculosis. The main rule of treatment is to deprive the joint of function. The nonoperative treatment is uncertain, takes years of time at best, and almost always is followed by marked deformity. In the operative treatment all the work is done on healthy bone, and at a considerable distance from the tuberculous portion. Hence, no danger of secondary infection exists. There remains, then, only the direct risk of the operation. This is very real without a skilled anesthetist. With one, it is almost negligible. The patient should be anesthetized on his face in a comfortable attitude, with cushions arranged so that his breathing will be unimpeded. When the operation is finished, the patient is rolled carefully onto the ambulance, and remains flat on his back for about a week before his wound is dressed. He is kept in recumbency for six weeks, though he may lie on his side or on his face after the first week. After this, he wears a spinal brace for about six months. The Hibbs operation theoretically is better than the Albee, for the bony bridge, once formed, is permanent, while anything may happen to a graft, sooner or later. On the other hand, the Albee operation is excellent in an early case in which the disease seems to be localized in one or two vertebrae. It is quickly done, and is excellent for lumbar disease. Ely finds a heavy percentage of second operations following the Hibbs operation. The results of these operations, as to the deformity, are good. In cases with secondarily infected tuberculous abscesses, the outlook is not particularly promising, but cases of recovery are on record.

## NEVADA STATE MEDICAL ASSOCIATION

A. J. HOOD, M. D., Elko.....President  
HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

**Washoe County Medical Society** (reported by J. A. Fuller)—The meeting of June 8 was held in Doctor Fuller's office, President C. H. West presiding.

The medico-legal aspects of mental diseases were discussed by George H. Henry. He explained the development of our present law from the old English law of 200 years ago. He touched on the injustice of the testimony of many so-called alienists and suggested several possible remedies, chief among which was, that the study of law should include a study of mental diseases; or that there should be special courts for the trial of the alleged insane; or that a specially trained State Commission should be formed for taking care of such cases.

Judge George Bartlett in discussion remarked that if the law was not sufficiently informed on medico-legal matters it was the fault of the medical profession.

J. L. Robinson spoke of the incompetence of much "expert testimony." Morrison suggested that the trouble was due to the fact that the witnesses were biased before they went on the stand. West thought the whole trouble was due to ignorance of mental disorders.

The application of A. L. Grover was read and placed in the hands of the censors. P. L. Robinson of Virginia City was elected to membership.

J. L. Robinson, R. H. Richardson and A. R. Dacosta, as a committee, prepared the following resolution, which was approved by the Society, regarding the death of A. Parker Lewis:

"Dr. A. Parker Lewis was born at Traes, Iowa, July 23, 1884, the son of James Henry Lewis. The family lived in Traes, where the father was a merchant, till the son was 7 years of age, when James Lewis took up government land in Kansas and became a farmer. Later they moved to Pomona, California, near which town he acquired an orange grove. In 1903 Parker Lewis entered Pomona College, later Stanford University, taking there a premedical course. He obtained his medical degree from the College of Physicians and Surgeons of San Francisco. He served with the Red Cross in the Philippines, and as quarantine officer when the bubonic plague visited San Francisco. He went to Alaska as physician-surgeon for a canning factory. Later he practiced in Sutter Creek, California, where on September 12, 1906, he married Margaret Payne. Two years later Doctor and Mrs. Lewis moved to Reno, and it was here, shortly after their arrival, that their only child, James, was born. Besides the widow and son two sisters survive, Sarah E. Lewis, professor of home economics at the University of Nevada, and Lucy M. Lewis, librarian of the Oregon Agricultural College.

In Doctor Lewis' death the medical profession, the community, and the state have met with a great loss.

**Physiologic Effects of Spermatoxin**—Robert M. Oslund, Chicago (Journal A. M. A.), shows that spermatoxins developed in the blood of the male animal have no effect on spermatogenesis or on mature sperm in the genital tract. Temporary aspermatogenesis found in some experiments is probably a consequence of general body reaction, to which tests are very sensitive, and not a specific reaction. The aspermatogenesis reported by various writers is too irregular in its appearance to be the result of specific antibody built up by regular procedure. It also appears quite probable that spermatoxins developed in the blood of the female animal have no effect on the natural response of its ova to sperm. General bodily reactions, especially the resulting anaphylaxis, cause abortion of ova and often of embryos, if the animals are pregnant. The delay of pregnancy occasionally found appears to be very short in duration and is probably caused by physical disturbances of the body rather than by antibody reactions.



## MEDICAL, HEALTH AND HEALTH AGENCY NEWS

**The Twentieth Semi-Annual Meeting of the California Northern District Medical Society Held at Colfax, May 27, 1926** (by John D. Lawson, secretary)—The morning session was devoted to a clinic on tubercular conditions by Robert A. Peers and C. D. Durand at the Colfax Hospital. A general outline of the methods of treatment was given by Peers to about forty members.

Following the morning session a luncheon was held at the Standard Oil Sanitarium, of which Peers is chief consultant.

At 1:30 p. m. a regular business session of the Society was held.

The following new members were admitted after a report by the Board of Censors: William L. Whittington, Luzerne B. Barnes, Rude, Robert Nichols.

A motion by Moulton, seconded by Bates, that dues should be raised to \$1 per year, passed.

R. O. Schofield tendered an invitation to the Society to attend the Plumas County meeting to be held at Hobart Mills, July 17, 1926.

A vote of thanks was extended Doctor Peers for his efforts in making the meeting a success, and a vote of thanks was also extended the Standard Oil Company and their medical staff for the excellent luncheon held under the direction of Mrs. Cameron.

A reading of papers was begun by L. A. Emge, whose subject was "The Symptomatology and Diagnosis of Pelvic Varicose Veins in Women." Discussion opened by L. P. Bell and continued by O. F. Johnson, C. E. Schoff, and L. M. Drysdale. A second paper was presented by C. E. Schoff, the title of which was "Use of Bismuth in Treatment of Syphilides." Discussion was opened by O. F. Johnson. The last paper was presented by J. D. Lawson and J. Edward Harbinson. The subject of this paper was "Roentgen-Ray Treatment of Erysipelas." Discussion by O. F. Johnson and J. R. Snyder.

The secretary extended an invitation to the Society to hold the next meeting in Woodland in October as the guest of the Woodland Clinic. Schoff arose to a point of order, stating that each alternate meeting was to be held in Sacramento according to the by-laws. After some discussion on this subject the matter was left to the discretion of the president and secretary.

There being no further business the meeting adjourned.

**University of California Medical School** (reported by L. S. Schmitt, acting secretary) — Harold Amoss, B. S., M. S., M. D., D. P. H., D. Sc., associate professor of medicine at Johns Hopkins University Medical School, will serve as a visiting lecturer during the early part of the coming semester.

The following promotions are effective for 1926-27:

Alice F. Maxwell, B. S., M. D., from assistant professor of obstetrics and gynecology to associate clinical professor of obstetrics and gynecology.

Saxton T. Pope, M. D., from assistant clinical professor of surgery to associate clinical professor of surgery.

Margaret Schulze, B. S., M. S., M. D., from instructor in obstetrics and gynecology to assistant professor of obstetrics and gynecology.

Henry H. Searls, B. S., M. D., from instructor in surgery to assistant professor of surgery.

Miriam E. Simpson, A. B., M. S., Ph. D., M. D., from instructor in anatomy to assistant professor of anatomy.

Frederick Ebersson, M. A., Ph. D., M. D., from instructor in medicine to assistant professor of medicine.

Francis S. Smyth, A. B., M. A., M. D., from instructor in pediatrics to assistant professor of pediatrics.

Bradford F. Dearing, M. D., from instructor in pediatrics to assistant clinical professor of pediatrics.

Frieda L. Kruse, M. D., from assistant in pediatrics to instructor in pediatrics.

Lloyd Hardgrave, M. D., from assistant in pediatrics to instructor in pediatrics.

Kunisada Kiyasu, A. B., M. D., from assistant in pediatrics to instructor in pediatrics.

Thomas E. Gibson, A. B., M. A., M. D., from assistant in urology to instructor in urology.

Ina M. Richter, M. D., from assistant in medicine to instructor in medicine.

Elizabeth A. Davis, B. S., M. D., from assistant in medicine to instructor in medicine.

Dorothy Atkinson, A. B., M. D., from assistant in medicine to instructor in medicine.

John J. Sampson, A. B., M. D., from assistant in medicine to instructor in medicine.

Robert Emmett Allen, A. B., M. D., from assistant in medicine to instructor in medicine.

Robertson Ward, A. B., M. A., M. D., from assistant in surgery to instructor in surgery.

Dudley Smith, M. D., from voluntary assistant in surgery to instructor in surgery.

Jessie L. P. Delprat, A. B., M. A., M. D., from assistant in medicine to instructor in medicine.

Forty-one graduate physicians from nearly every state on the Pacific slope registered for the graduate summer courses. These courses opened on the 7th of June and closed on the 3rd of July. They included courses in general medicine, surgery, pediatrics, circulatory diseases, gastro-intestinal diseases, x-ray, orthopedics, urology, eye, nose and throat, neuropsychiatry, pathology, laboratory diagnosis.

The new five-story 350 bed Providence Hospital in Oakland is nearing completion. The Sisters at the head of this great health-serving institution deserve praise for this undertaking, and the people of the East Bay region justly point with pride to this evidence of progress.

At a recent meeting of the Saint Francis Hospital Clinical Society Robert F. Kile discussed "Some Indications for X-Ray Treatments, Especially Deep Therapy," and L. B. Rogers, managing director of the hospital, discussed "Administration Problems."

Saint Joseph's Hospital, San Francisco, has started the construction of a new million-dollar hospital.

Mother-General M. Aloysia of the Franciscan Order of Sisters of the Sacred Heart, in charge of Saint Joseph's Hospital, turned the first spadeful of earth at the "ground-breaking" exercises. Archbishop Hanna offered the benediction and delivered the inaugural address.

The regular meeting of Saint Luke's Hospital Clinical Club was held on Thursday, June 3, the subject of the day's discussion being "Five Years of Deep Roentgen Therapy in Malignant Diseases," and the speaker, John M. Rehfsch. He stated that during the time mentioned (five years) upward of 800 cases had been treated, a large enough number, he felt, from which to get sufficient data to make an intelligible and interesting report, and one of considerable value not only to the roentgenologist, but to the referring physician as, with a few brilliant exceptions, the articles appearing in the general medical press have been misleading, the best x-ray articles unfortunately being segregated in the pure x-ray journals.

Deep roentgen therapy is essentially a biophysical one, the biological factor being much more important in therapy than is the physical one; yet a great deal more is known about the less important factor and practically nothing about the most important one. Advance, however, is being made in the solution of these problems, two or three recent researches having immediate practical value in the application of the method. Kok and Forlaender have done some work which is very illuminating as to the method by which it is most hopeful for us to attack our malignancies. They have shown that as much as six skin doses of x-ray applied directly to tumor transplants are not sufficient to prevent their taking; while a dose equivalent to but 4 per cent of one skin dose administered to animals previous to transplanting healthy

tumor grafts was sufficient to prevent successful transplantation. This would seem to be excellent experimental evidence, which is surely borne out by every clinical fact. We know that our results when successful are due not so much to direct tumor action as they are due to some general influence, in some sense an immunological influence on the organism. As a whole there was very little doubt in the speaker's mind that the caustic effect of the x-ray is a negligible factor in attempting tumor control. Murphy's work on the relation of lymphocytes and the lymphocytic tissue to tumor immunity is very important. Gaylord has told of the damaging effect of anesthesia on tumor immunity, and this may be a partial explanation of what has often been demonstrated that surgical interference is a very risky thing in a tumor, the infiltrative properties of which are under partial or complete control by x-ray.

Broad generalizations are entirely out of place in discussing deep therapy; the unlikely and the impossible persist in happening while the confidently expected refuses to occur. Every case is a law unto itself, being controlled by the rules of a biology which has not even commenced to be understood.

A number of lantern slides presented at the close of the lecture, and demonstrating the "before and after" of deep ray therapy, showed some remarkable results.

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H. A. Rosenkranz (W. P. Story Building, Los Angeles) has evolved some urological history and examination forms which he will be glad to forward to anyone upon request.

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The Pacific Coast Oto-Ophthalmological Society held its fourteenth annual meeting in San Francisco, April 26-28, 1926: Kaspar Pischel, San Francisco, president; Glen Campbell, Vancouver, B. C., first vice-president; E. M. Neher, Salt Lake City, second vice-president; Walter F. Hoffman, 817 Summit Avenue, Seattle, secretary-treasurer.

The meetings were well attended, a large program of excellent papers and discussions was rendered, and the social features were all that could be desired. At the business session the following officers were elected for the year 1926-27: Carroll Smith, Spokane, Washington, president; William Mellinger, Santa Barbara, California, first vice-president; Frank Burton, San Diego, California, second vice-president; Walter F. Hoffman, 817 Summit Avenue, Seattle, Washington, secretary-treasurer.

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Examinations of candidates for entrance into the United States Public Health Service will be held at San Francisco, California, July 12, 1926.

Requests for information or permission to take this examination should be addressed to the Surgeon-General, United States Public Health Service, Washington, D. C.

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The annual meeting of the Mid-Western Association of Anesthetists will be held October 11-14, 1926, in Kansas City, Missouri. Headquarters, Baltimore Hotel.

An interesting and attractive program is in the process of making. Any physician or dentist desiring to read a paper should send the title of his paper to the secretary, Ralph M. Waters, M.D., 425 Argyle Building, Kansas City, Missouri.

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Local and county governments now maintain 471 hospitals, with 53,027 beds. City governments maintain 371 hospitals with 59,630 beds, and city and counties combined maintain sixty-nine hospitals with 7118 beds. Altogether, county and municipal governments combined support 911 hospitals having 119,775 beds, comprising 14.9 per cent of the entire bed capacity in the United States.—J. A. M. A.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

Items of Interest by C. B. Pinkham, M. D.,  
Secretary-Treasurer

Failing to agree on the third count, the jury hearing the case of John E. Beck, Tulare physician accused under a Federal Grand Jury indictment of violating the Harrison Narcotic Act, yesterday returned verdicts of not guilty in two of the three indictments.—Fresno Republican, May 11, 1926.

Proceedings to abolish both the Berkeley Chiropractic College and the Berkeley Chiropractic High School will be started at once by the office of Attorney-General U. S. Webb, according to announcement yesterday, upon the strength of information made out against the two institutions by the newly created State Board of Chiropractic Examiners.—San Francisco Chronicle, June 9, 1926.

The Grand Jury indictment against Dr. Charles E. Brown, Fresno physician, charging violation of the Harrison Narcotic Act, was dismissed today by United States Judge Paul J. McCormick on the recommendation of Assistant United States Attorney Albert K. Lucas. The recommendation came from Lucas on the ground that there was not sufficient evidence upon which to convict.—Fresno Bee, May 21, 1926.

According to the report of Special Agent Carter, Mrs. E. M. Coats, referred to as one of the most persistent violators of the Medical Practice Act in California, was recently again charged with violation of the law.

A new form of state license recently came to the attention of the Board of Medical Examiners when Professor K. Feige of San Diego requested a drugless practitioner certificate in California based upon a license issued to him by the "Oklahoma State Board of Combinathic Examiners" which entitled him to practice "combinathics," whatever that may be.

Charges against five dentists were heard yesterday by the State Board of Dental Examiners, with a view of determining whether their licenses should be revoked or suspended for alleged violation of the state laws regulating dentistry.—San Francisco Chronicle, May 28, 1926.

According to the San Francisco Call of May 13, 1926, Fong Poy, who we understand is also known as Fong Wan, has filed suit against Harry Henderson, Special Agent of the Board of Medical Examiners, for \$10,000 damages. (See "News Items," June, 1926.)

Concha Gonzales was recently charged with violation of the Medical Practice Act, based upon alleged practice of medicine among the Mexicans.

W. J. Heinrichs, mentioned in the June issue of "News Items," was recently sentenced to pay a fine of \$100 and serve ninety days in jail, jail sentence being suspended on payment of the fine, on the condition that defendant refrain from further violation of the Medical Act.

Rollie Jamison, mentioned in "News Items" for June as operating a Suggestive Therapeutic Clinic in Los Angeles, recently paid a fine of \$100, following his plea of guilty of violation of the Medical Practice Act.

The Kinetic Drugless College (Chiropractors Incorporated) has recently been brought to the attention of the Board of Medical Examiners, based on allegations of irregularities in the issuing of diplomas.

M. T. Larkin, a Chirothesian, mentioned in the "News Items" of December, 1925, has again been arrested in San Diego, charged with violation of the Medical Practice Act. It is reported that "M. T. Larkin is a Chirothesian and claims that his license from the Chirothesian Church gives him the right to administer any treatment that is in accordance with his religious belief. . . . His women patients were first asked to remove all of their clothes; he then examines them by feeling with his hands. . . . In one case he is alleged to have used a carrot as a surgical instrument in the treatment of a woman who had been married fourteen years without having any children."

Franklin E. Kerr, M.D., D.O., referred to in "News Items" of May, 1926, some time since convicted of sending poisoned candy to his wife through the mails and sentenced to five years' imprisonment, has been denied a review of his case by the United States Supreme Court,



according to a press dispatch dated Washington, D. C., June 7, 1926. Doctor Kerr has been served with a citation to show cause why his license to practice in the state of California should not be revoked, and the hearing will take place at the coming July board meeting.

Dr. Charles Lee was given an indeterminate sentence of one to five years in San Quentin yesterday by Superior Judge Roche. Doctor Lee was convicted by a jury last week on a charge of performing a criminal abortion.—*San Francisco Chronicle*, May 16, 1926. The records of the Board of Medical Examiners show no one by the name of Charles Lee licensed to practice in this state.

The *American Medical Journal* of May 15, 1926, published an interesting article relating the activities of certain alleged diploma mills, mentioning the Lincoln-Jefferson University and the University of Trinity College, both located in Chicago, relating that in slightly more than two years after September 16, 1920, 536 degrees of thirty-eight varieties in twenty subjects had been listed by the Lincoln-Jefferson University and its affiliated concerns.

Judge Arthur S. Keetch in Superior Court today ordered subpoenas issued for the appearance of Gertrude Torrance, 17, and her mother before him next Thursday following the statement by Dr. William H. Lochman, 80, charged with an illegal operation, that it was the second such operation he had performed. . . . Doctor Lochman was in court today for sentence, which was postponed.—*Los Angeles Herald*, June 3, 1926.

Dr. F. K. Lord, Modesto physician serving a 100-day term in the Stanislaus County Jail for selling narcotics, will regain his freedom in a \$100 bail under a writ of habeas corpus granted yesterday by the State Supreme Court. Lord was found guilty on last January 21 and sentenced to serve one hundred days in lieu of \$100 fine for selling five grains of morphine to Nellie Nash. . . . (San Francisco Examiner, June 8, 1926.) Prior mention of Doctor Lord's difficulties have appeared in "News Items" for March, May, and June.

Dr. H. A. McClelland, Turlock chiropractor and veteran of the World War, was yesterday ordered to Letterman Hospital, San Francisco, for observation as to his mental and physical capabilities. . . . McClelland was arrested here several weeks ago on a charge of passing a worthless check on Carl Salvar. . . .—*Modesto News Herald*, May 4, 1926.

Rupert E. McKibbin, M. D., formerly of Los Angeles, mentioned in "News Items," February, 1926, issue, has been cited to show cause why his license to practice in the state of California should not be revoked at the coming July meeting, based upon his record of conviction of violation of the Harrison Narcotic Act.

Nothing more than the casual bite of a common jail "cootie" is at the bottom of a \$35,000 suit of Dr. Frederick Newton, Santa Monica chiropractor, against Mrs. Clara D. Ebert, the defense attempted to establish yesterday when the matter was tried before Judge Bishop. . . .—*Los Angeles Times*, June 4, 1926.

Accused of operating a "diploma mill designed wholly to issue diplomas to unqualified persons," Dr. Percy Purviance, president of the Berkeley Chiropractic College and Berkeley Chiropractic High School, will be named defendant in a suit brought . . . to show reason why his schools should not be closed.—*San Francisco Examiner*, June 9, 1926.

Charges against Arthur E. Pike, D. O., preferred by the Board of Osteopathic Examiners (mentioned in "News Items" of December, 1925) have been dismissed, according to the Long Beach Press Telegram of May 3, 1926.

Robert W. Roland was recently sentenced by the courts in Los Angeles to pay a fine of \$100 following his plea of guilty to a charge of violation of the Medical Practice Act, according to a report by Special Agent Carter, who relates that Roland holds a naturopathic diploma issued by the Pasadena Chiropractic College, and is advertising the sale of Vivogen.

Dr. Jack Smitherman, colored physician and surgeon, yesterday was fined \$25 for contempt of court by Judge Raymond I. Turney. Doctor Smitherman was charged with having written letters to the court saying that Miss Edith Johnson, charged with possessing a quantity of beer, was unable to appear because of sickness. Investi-

gation disclosed that the woman was well enough to have appeared.—*Los Angeles Examiner*, May 9, 1926.

Federal Judge James yesterday fined Dr. Fred K. Strasser, Hemet physician, \$500 for selling narcotics without making a record of the sale. . . .—*Los Angeles Illustrated Daily News*, May 25, 1926.) Prior mention has been made in "News Items" of May and June, 1926. Doctor Strasser has been called before the Board of Medical Examiners at the coming July meeting to show cause why his license should not be revoked.

Severely lecturing Dr. Orin R. Wakefield, Hollywood physician, for selling morphine to young girls, Judge Hardy sent the doctor to the county jail for four years. According to testimony the physician sold forty morphine pills to Cleo Nerski, movie extra, who is now "taking the cure" at Norwalk. Doctor Wakefield testified he sold the girl the drug because she "needed it," but inspectors for the State Medical Board declared Miss Nerski, an addict, had received no narcotics since she went to Norwalk and was about ready to be discharged free from the habit. "It is a most despicable thing that a man of your standing in the community should stoop so low as to commercialize the cravings of these poor creatures for drugs," Judge Hardy declared. "However, in view of your professional skill and standing in the community, I am not going to give you the maximum sentence of six years. (Los Angeles Examiner, June 2, 1926.) Previous mention was made in "News Items" of May, 1926.

Arthur E. Webb, who recently gained notoriety, it being alleged that he assumed the credentials of Rupert E. McKibbin and learned how to forge his signature and where he kept his bank account, thereafter being arrested in Alaska, as mentioned in "News Items" of February, 1926, is reported as again incarcerated in McNeil's Island on a charge of violation of the national narcotic law.

Further investigations by the proper authorities were recommended in a verdict this morning by the coroner's jury following investigation into the death of Evelyn Thayer Bancroft, age 28, 740 North Lake Avenue, held at the funeral parlors of C. F. Lamb and Salisbury Company. The jury in this document named Dr. Carl J. Weberg as the chiropractor who had treated the young woman four years ago and stated the cause of death to have been spinal paralysis from a dislocation of the fifth cervical vertebra. . . .—*Pasadena Star News*, May 14, 1926.

Bon Yee, Chinese herb doctor, was recently arrested in Santa Rosa on a charge of violation of the Medical Practice Act, according to the Santa Rosa Press Democrat of May 27, 1926.

Herbert E. Young recently pleaded guilty to a violation of the Medical Practice Act in San Bernardino and was sentenced to serve ninety days in the county jail, said sentence being suspended for a period of two years on condition that the defendant does not violate the Medical Practice Act during the period of his probation. Young's business card refers to him, among other things, as a "philosopher of spinal therapy."

Bertram Ball, D. D. S., was fined \$500 June 4, according to the New York Times, for practicing medicine would be taken to the United States Supreme Court, if necessary, to test the constitutionality of the state law. Doctor Ball is said to have prescribed medicine for the kidneys of a patient he treated for pyorrhea.—*Journal A. M. A.*, June 12, 1926.

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Health education is a good deal like stocking a stream with fish. When you go back to drop a line, you may find some of them rising to the bait, but probably most of them have gone away.—*Ohio Health News*.

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It is a mark of maturity to differentiate easily and naturally between personal or social opposition and intellectual opposition.—A. J. Nock, *Harpers' Magazine*.

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Sixty-two per cent of all hospital beds in this country are financed by government agencies—national, state, county, and city.—J. A. M. A.

## READERS' FORUM

### BUSINESS IS BUSINESS!

*Editor of CALIFORNIA AND WESTERN MEDICINE*—Enterprise in business is to be both admired and praised under normal circumstances. But when it gets to the limit of a mail order house shipping a "blank cartridge pistol" together with plenty of cartridges to a child in a ward in a hospital free bed, and then making a collect charge for express against the hospital, we think it about time to protest.

A package so wrapped as to disclose nothing of its contents and addressed to Melvin B. —, Saint Joseph's Hospital, San Francisco, California, came by express to the hospital, with a collect charge of 64 cents on it. Thinking the package contained something useful, the hospital paid the charges.

A boy of 12, seriously ill for a year in a hospital and confined to bed or wheelchair, a nonpaying patient, ordered the pistol by mail out of such money as he had been hoarding for a year. Inside the package was the firm name of Johnson Smith & Co., Racine, Wisconsin.

The shipper of this package knew that it was going to a hospital. Perhaps that is why the cartridge boxes bore this legend: "Loaded with a special grade of powder giving the loudest possible report."

It seems rather worse than an affront for a mail order house to inveigle a hospital into paying 64 cents express charges to deliver a 50-cent pistol (that being the price according to the enclosed list), and for a nonpay patient.

The attending surgeon came in just as the patient was preparing to load and fire. A powder burn from this toy can destroy eyes, disfigure faces, and the powder burns from such nuisances frequently produce tetanus.

ETHAN H. SMITH, M. D.

Sonoma, California, June 11, 1926.

*Dear Editor*—Kindly permit me to congratulate you on the splendid journal you are giving to the medical profession. It gives to its readers help, service, knowledge, inspiration, pleasure, and points out not only the good, the strong, and the lovable points in our calling, but also our shortcomings and our weak points.

Enclosed please find my check for renewal, and allow me to thank you for the good I have received by reading your journal.

S. BOOLSEN, M. D.

The following extracts from an article by W. R. P. Emerson (Am. Jour. Med. Sciences) carry an important message to all physicians:

The health problem aside from its end result—disease—is left largely to the mercies of anyone who may chance to be interested in it—no man's land—where is found the dietitian, physical educator, social worker, teacher, and others who in a well-organized health plan would be valuable aids and adjuncts.

The victim of this condition of affairs is the growing child and back of it loom sickness and death—a morbidity and mortality that increase with the complexities of modern life.

As yet school organization has been little affected by any serious attempt to meet the health needs of the child. The desirability of doing something in this direction is felt to some degree but the school authorities have gone no farther than to lessen their sense of responsibility by preaching health to pupils who by their own efforts alone are practically helpless. A great wave of printed matter has inundated teachers, affording them general information on many aspects of living and this must be passed on to their charges.

"Learning by doing" has influenced the school authorities and this has led to health chores and other devices for getting the new material over into the life of the child. Great organizations have capitalized this situation and its possibilities. For example, I have before me the in-

structions of an organization which has highly developed machinery for entering thousands of schools and homes. The first attack consists of requiring the child to perform eleven daily chores. By doing these he may expect to become well and strong. The chores range from the simple matters, such as carrying a clean handkerchief, to the more difficult one of having a bowel movement every day although no directions are given for finding and removing causes of constipation. The eleven chores, however, are only the beginning of the process, for directions go on in some forty-five separate pages of printed matter with extensive elaboration through a second, third and fourth series—something of a hygienic *cum laude* cumulation ending with a Phi Beta Kappa which calls for eternal vigilance in such matters as neatness of appearance; keeping surroundings sightly and sanitary; personal control of ventilation and temperature; cheerfulness, straightforwardness, cleanmindedness, doing one thing at a time and the most important first; care for the health of others; playing fair; kind acts; a balanced diet; reading matter held twelve inches from the eyes; proper attention to elimination; deep breathing; sleeping without a pillow; washing hair and scalp!

This bewildering rolling up of hygienic proprieties reminds one of the details of the Mosaic code, only that was not taken all at once.

Rules which call for drinking as much milk as possible are not sound because the using of milk to quench thirst is bad practice, as is also the continuation of a liquid diet after infancy. Another of the commandments is "Drink at least four glasses of water a day." Here again no account is taken of the very common practice of washing food down with water and if the child takes as much as a quart of milk a day eight glasses of liquids is excessive. The last of the list is "A bowel movement every morning." Consequently large numbers of children form the habit of taking physic, suppositories or enemas, every day of their lives in order to secure this result.

"Testimonials" from children are published and given as wide circulation as has been given those for patent medicines. Here are samples published by the staff of a state public health association. A boy in the fourth grade writes, "My face was pale and white and I started eating cabbage, carrots, radishes, corn and potatoes, and now I have a good color." The boy goes on to say, "I got into the habit of going to bed at seven o'clock and getting up at six o'clock by wanting to be able to mark my score card. . . . I did my chores twelve weeks and didn't forget a clean handkerchief once. Because I did my chores I got a squire's pin." Another boy—age not given—writes, "I wash my hair with emulsified cocoanut oil at least once a month. If you had done this, grandpa, you would not have been baldheaded. I am never going to grow old for I take physical exercises daily and sit in good position that my bones may grow properly." Again, "I had the toothache before I started to do the chores but afterward I did not." And, "If you eat good food you will be well and strong." It is a girl of eleven who writes, "I adore washing handkerchiefs so I do not mind the fourth chore at all."

To tell a child, "Do this and you will be well" is cruel. There is no greater fallacy taught under the guise of medical advice. The effect of the chore system as now used is to sanction expectations from certain practices which are entirely out of accord with experience and accurate knowledge. The child asks for health and he is given a medal! This is not honest treatment and amounts to a betrayal of his confidence. One of the end results of such methods is clearly seen in the reaction of the high school boy or girl who has reached the stage where he decides that all this health activity is "bunk" and he will have nothing to do with it.

—

You can't kick people into being nice to you. You can earn their respect and co-operation, and your value to the community will be increased thereby.—Ohio Health News, May 1, 1926.

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There's now a car to every five people, which should limit each driver to four pedestrians.—Manila Bulletin.

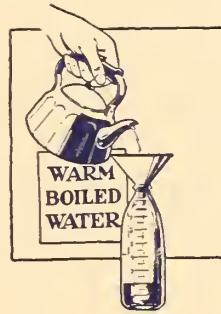




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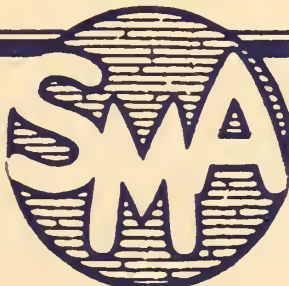
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# CALIFORNIA AND WESTERN MEDICINE

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# CALIFORNIA AND WESTERN MEDICINE

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No. 2

## TUBERCULOSIS

By JOSEPH W. COOK \*

The vast majority of patients suffering with tuberculosis, as well as infirmities, are still cared for by the general practitioner. Not enough of our vast literature on the subject is readily adaptable to the conditions such doctors must meet.

Here is an inspiring, thought-provoking essay by "a general practitioner and country doctor," himself a one-time sufferer from the white plague, which contains valuable messages to doctors and patients. The story is told in a delightful narrative style that enhances the value of any contribution and toward which scientific literature is tending.

—Editor.

IT SEEMS rather presumptuous for me, a general practitioner and county doctor, to read a paper on tuberculosis. My colleague, Doctor Bramkamp, has just given a résumé of the diagnosis and treatment from the point of view of a specialist. What I have to say to you is from the point of view of a general practitioner, who is called upon to do more or less tuberculosis work. I will make an appeal to you from my own experience as a patient eight years ago, and as one who is called upon to treat patients, many of whom are disgusted with doctors, both general and special, but in desperation must consult one more.

For nine years I was particularly interested in surgery, and in Persia, during four and a half years of my residence there, operated on some 400 cataract cases in addition to stones, hernias, empyemas, bone tumors, osteomyelitis, etc.; not much abdominal surgery.

During all this time I remember seeing not more than a half-dozen patients with tuberculosis of the lungs. There is really little there, but I am sure now that I often overlooked it. This may have been my fault, but I venture to say that it was more the fault of the University of Pennsylvania, as they neglected to stress tuberculosis; and I spent endless hours in stupid laboratory work, and more endless hours in watching clever surgeons advertising their skill while countless numbers were dying with tuberculosis, and we students were to go out to practice unable to recognize it, as a rule, until the patient was about to die; or if we fell upon the diagnosis sooner, we were to suggest a change of climate, feeling that we had done our duty.

I woke up one day with tuberculosis. In November and March I had been carefully examined for the Army. I was nervous and run down and had a slight hacking cough. By May I began to have dark-colored sputum which I bluffed myself into thinking came from my nose. I began to get hoarse on all occasions after talking. One day in June I had a terrific pain over my left clavicle which lasted ten days. Meanwhile, I had had a constant sore throat, red and glistening, a large uvula which occasionally almost choked me. I had my throat examined by a specialist. My lungs were never thought of until I begged a friend to go over them, but even with an obvious pleurisy and with a temperature of 104, he found nothing. My left ear burned almost constantly. An ulcer in the anal region which bled freely also annoyed me.

Finally, in August a slight hemorrhage followed by a positive sputum examination settled the diagnosis. I was lucky and got well. The early hemorrhage saved the day. Others are not so fortunate, and the diagnosis of tuberculosis remains a most difficult problem for physicians the world over.

I plead for early diagnosis. General practitioners must learn what to look for and how to recognize the symptoms.

Lawrason Brown has splendidly summarized the five cardinal signs, present in practically every case, by recognition of which 95 per cent of cases can be definitely determined: (1) positive sputum; (2) definite hemoptysis; (3) definite pleurisy with effusion; (4) definite localized rales on cough above level of third rib at apex; (5) definite x-ray changes in same area.

The important thing, as Alexander Miller says, is to remember that tuberculosis has existed a long time without manifestations which have been recognized. It is a chronic illness, not by any means continuous. It is a relapsing infection, with slight manifestations followed by short or long periods of quiescence, and

\* Joseph W. Cook (Banning, California). M. D. University of Pennsylvania, 1910; B. A. Princeton University, 1904. Graduate study: eighteen months in University Hospital, Philadelphia. General practice. Previous honors and services: Captain U. S. M. C. during late war; medical missionary in Persia 1912-17 in charge American Hospital, Teheran, Persia.

more important than physical signs are slight malaise, slight fatigability, slight loss of weight, slight digestive disturbance, slight irritability with or without afternoon temperature, and rapid pulse.

Do not be misled by the large size or good general appearance of a patient; some of the sickest patients are big, fine-looking men, but on examination their chests are found to be filled with rales.

Active tuberculosis, according to Bushnell, is due to failure in immunization in a minority of the infected, but this failure to resist may be and often is slight and temporary, so that even relatively trivial remedial measures are sufficient to enable the patient's resistance to reassert itself and to triumph over the disease.

One object of treatment, then, is to help the patient to cure himself. We are helping the patient, not attacking directly the tubercle bacillus, and therefore we must individualize in our treatment. There is no routine treatment applicable to all patients alike in pulmonary tuberculosis.

John King, after forty years' experience, both subjectively and objectively, came to the conclusion that tuberculosis is not the result of infection alone, but the result of infection plus something else. That instead of fighting the bacillus tubercular we had better learn how to live with tuberculosis and wage war against the something else. The something else may be an economic or social condition, worry, anxiety, fears, fancies, overwork, or just damn foolishness. One of my patients said to me one day that he had come to the conclusion that all tubercular patients were damn fools. Being one myself, I knew it only too well, so agreed with him.

The treatment of tuberculosis is almost unique, in that it is the task of the physician to educate his patient to take up a new mode of life. We must help the patient to cure himself. The physician must become a teacher, a guide, and adviser both physical and spiritual.

Inasmuch as there is no definite cure for tuberculosis, it is incumbent, I feel, upon us to be fair and state frankly the conditions of cure. These conditions I believe to be four: rest, fresh air, good food, and peace of mind. You notice that I have not mentioned medicines. However, their intelligent use is not the least important phase of the whole subject. "The patient is a human being," says Fishberg, "and when we consider the human element we find that as a rule he has little confidence in a physician who has no remedy for his ailment. This is not only true of the ignorant, but also to the same extent among supposedly intelligent patients. It cannot be denied that in many respects medicaments properly administered act by psychic suggestion." I have searched for six years and all I can learn of medicines in tuberculosis is that their chief value lies in the psychic effect, be it tuberculin, iron, arsenic, or what not. Even so, when all is said and done, the psychic value is of the greatest value. The one medicine which seems to have the greatest acknowledged value, whether psychic or physical cannot be stated, is sodium cacodylate. By symptomatic treatment we can make our patients more comfortable and more happy, and so increase their chance of

recovery. But to return to the four essentials in treatment or conditions of cure, rest, fresh air, good food, and peace of mind.

The meaning of rest should be understood. Just lying in bed is not sufficient. It is physical and mental relaxation. Mental rest is just as important as is physical. Trudeau used to say, "Conquer fate by acquiescence." "Letting go" is, I believe, the secret of real rest. Teach your patient the value of total relaxation of all muscles. Let him practice lying absolutely relaxed, every muscle limp. Remember it requires 20 per cent more energy to sit up than to lie down, and 30 per cent more to stand up.

Rest in every way possible. Teach your patient to lie on his bad side. As Webb recommended, persuade him to spend twenty-three hours a day in this position. Webb said he was doing fewer pneumothorax operations by far since he had persisted in this treatment. The rationale is clear. Watch your patient breathe; the bad side lags; nature is trying to rest it by keeping this side quiet and splinting it. Help nature. Your patient won't like it at first, but after a few days he will much prefer it.

Teach your patient to stop breathing as much as possible. Knopf several years ago introduced his controlled diaphragmatic breathing. "Pretend," he says, "that your breath starts from your right big toe, goes up your right leg to the region of your liver, crosses to the left while you hold your breath, and passes down and out your left foot." A childish idea, but it works. Practice slowing your breathing to eight or ten per minute, and see how much your lung would be rested.

Stop your patient breathing with his chest and insist on diaphragmatic or stomach breathing; never breathe deeply.

Bushnell says: "When the patient breathes with the affected lung, the healthy parts expand more than the diseased parts. Hence there is great danger of the aspiration of lymph containing tubercle bacilli. Rest is used to prevent tuberculosis from spreading. The inflamed focus in the lung is a boil that does not hurt because there are no nerves in the substance of the lung. Deep breathing amounts to squeezing the boil."

The length of rest is to be determined only by the reaction of the patient. At Trudeau's all patients are routinely put to bed for six weeks after arrival. Absolute rest in bed should be continued until the temperature and pulse are normal, and other symptoms are alleviated. Personally when this situation arrives I try to persuade my patient to stay in bed a month more, and in some cases six months more. In others I let them begin to sit up gradually and then later begin to walk a little, increasing every day.

Webb says, in regard to this phase, "Rest in pulmonary tuberculosis should be prolonged many months after the temperature and pulse have become normal and sputum has disappeared. The tubercular deposits in lungs have in general started to clear after six months of rest, but have not been completely absorbed until from two to three years of rest." And Pottenger adds that "marked lesions



will disappear entirely" after continued absolute rest.

The value of fresh air and good food are so well known that they are accepted by us all as essentials in treatment. You are all undoubtedly familiar with the experiment several years ago by army doctors in which a group of men with tuberculosis were selected, all in about the same physical condition. One group was placed in a contrivance which permitted the bodies of the patients to be in fresh air and their heads in close, stuffy compartments. Another group was so placed that the conditions were reversed; their bodies were in stuffy compartments and their heads in the fresh air. Strange to say, it was shown that the men whose bodies were given fresh air did better than the ones whose heads were in the fresh air, showing that our bodies breathe as well as our lungs, and that not only our heads but our whole bodies must be given all the fresh air possible.

And this introduces the subject of fresh-air baths and sun baths. Rollier scoffs at those who say that lungs cannot be treated by the sun, but, as in peritonitis, minimal exposure to the affected part is essential at first. It may be presumptuous, but I venture to say that sunlight given under careful supervision is the most important contribution to the treatment of tuberculosis that we have. Rollier's experience has proved the almost unlimited usefulness of the sun in the treatment of extrapulmonary tubercular lesions, and everyday tuberculosis specialists are being convinced that the sun can do the same in the treatment of pulmonary tuberculosis. I cannot understand the hesitancy on the part of many physicians to give their patients the advantage of the marvelous healing and stimulating power of the sun's rays. If without the sun's rays we cannot live, I feel that with more of the sun's rays we should live well and better than ever.

As to food, there is no diet for tuberculosis. Just good home food, well balanced; no stuffing.

Peace of mind. A man said to me the other day about his wife, "Whenever she expects to get well she improves." Bushnell spoke of the value of "an autopsychotherapy in which the patient is taught to ignore unfavorable sensations and suggest to himself sensations of well-being and of strength. This comes close to the position of Coué, but with this difference: optimism is only in place when the conditions of treatment are complied with and when removable injurious influences have been done away with."

Webb recently wrote, "We must remember that a mind unoccupied is a mind distressed." The patient must be happy while resting.

A patient must be taught the meaning of mental "letting go," that the only way, as Trudeau used to say, as I quoted before, was to "conquer fate by acquiescence." Teach your patient, if you can, and I confess it is difficult because it's the rare physician who has learned it himself, to stop struggling and hurrying to get well, but to let go; acquiesce, bow to fate if you will, and work out a philosophy of life which will suit him and help him and lift him. It may not cure him, but it will take his fear away and give him something which is more worth while

even than health itself. I am getting into deep water, but I am convinced that here begins the greatest work that a physician is called upon to undertake. One must study the soul life of the tubercular patient.

Gentlemen, we all feel our lives to be charmed. No tuberculosis for us; but you may wake up some day and find you have tuberculosis. I plead for consideration in your dealing with tubercular patients. Remember, you may be the next and in the same position, having to change your work or mode of life. Put yourself in his place and, remember, it is never too late to mend.

"A true physician for tubercular patients," as Knopf said, "must be a sociologist and the highest type of psychologist, the sympathetic physician for a suffering soul, a worried mind, and a saddened heart." The great Detwiler once said to his resident Knopf in reference to a patient, rather unaccountably losing ground, "My son, see if there is anything on his mind."

Just a word as to the cure of tuberculosis. We should remember there are two types of cures to be striven for: First, the perfect physical cure; second, the economic cure, i. e., to build up your patient's physical and mental condition and give him the necessary training, bearing in mind what he can and cannot do, that he may be trusted to go out into the world and earn his living. His tuberculosis may be quiescent or latent, but it matters not, provided your patient can keep his resistance well above the danger level. I trust the time will come when we can have in America, as they have in England, communities or industries where ex-tubercular patients can be rehabilitated. It would be a great boon if only our tubercular patients could find work in accord with their working abilities—one hour, two hours or more of remunerative work per day until gradually they become able to do full-time work.

I feel there is no question in the minds of all of us that the essentials of treatment are in general as have been given her. But for a moment, may we consider the appalling fact that the majority of patients can in no proper manner afford to do what I have suggested as essential.

Many of them run out of money before they find out what is the matter with them—for frequent examinations by ourselves and by specialists, plus x-rays, stereoscopic and fluoroscopic examinations, plus again in many instances surgical operations for removal of all removable organs, as Pottenger states is not infrequent—all these cost considerable money. Even the poor man pays these costs not unwillingly, as he is anxious to find out, but having found out, he is told to rest. He may have a wife and four children, and may have been a clerk on a small salary. And now what? It is for this type of patient, of whom there are many, that we must band ourselves together, realizing that we are doctors not alone for the treatment of sick individuals from whom we obtain our livelihood, but that we are a band of men to whom the care of the physical welfare of the nation and the world is a sacred obligation.

We must find a way to help this class of patients.

Individually we do all we can in the way of advice and treatment, but the financial problem is one for the county and state to solve, and we must advise how it can be done. Is the building of a hospital capable of holding from thirty to forty of our county patients sufficient? Perhaps I am broaching a subject which is most difficult of solution. However, I raise the question in good faith.

We are in a position to know better than any other class of people the needs of the indigent or half-indigent tubercular patient, and we must help our communities solve this great problem, bearing in mind the very intimate nature of the problem, as who knows but that he may himself be a part of that problem at some time.

At this point will it be out of place to make a plea that we may be fairer with our tubercular patients? The cry those of us who are doing tuberculosis work hear on all sides is, "Oh, if only Doctor So-and-So had examined me carefully and had told me truthfully; or if he didn't know, if he had only been fair enough to send me to a man who did!" As a patient said to me the other day, "I used to go to my doctor's office and he'd open the neck of my dress, and sometimes not even that, and listen a moment and say, 'Oh, you are all right,' in spite of the fact that he had tapped my chest for fluid, and I had had a cough and fever for months. For nearly a year this continued. Finally he commenced tuberculin, and for another year I went to his office for tuberculin."

The apparent prevalence of the custom of having patients who should be taking absolute rest in bed for active tuberculosis come to a doctor's office for treatment seems to me rather startling. In some instances the very men who stress bed rest have their patients come for miles by auto or trolley, and wait in crowded waiting-rooms where the nurse at the desk may ask, "Have you shown any color?" Such patients become exhausted, and go home wondering and questioning as to the fairness and wisdom of such a course of treatment.

Is any known treatment of tuberculosis of sufficient value to offset the exhaustion attendant upon this prevalent custom? Not one, but many patients have assured me that this has been their experience. "There is little after all," as one patient expressed it to me, "that the physician can do in the way of medical treatment, but the patient needs his attendance nevertheless. The average patient has no adequate conception of what rest means, or when to begin to exercise or when to discontinue it, and he needs careful supervision of all these matters. Proper guidance may mean the difference between success and disaster," but in all justice absolute fairness must be accorded by all physicians, whether general practitioners or specialists.

I cannot close in a better way than by quoting from a paper by E. T. Shields on home treatment of tuberculosis. After stressing in general the points I have tried to bring out, he urges the practical value of a hobby as a therapeutic measure for all patients, and then adds:

"Life's values cannot be measured alone in terms of physical strength and material possessions. More

truly is its worth to be discovered in nobility of character, self-discipline, and unselfish service for fellow-men. Bodily weakness and physical handicaps are not necessarily incompatible with high moral courage, mental vigor, and able service. Human lives though shattered and broken in body may not ruthlessly be consigned to the scrap heap. Like a broken alabaster box of precious ointment, they may ever pour out unselfishly of their richness upon those around them. Many such broken and shattered lives can still be mended, and their usefulness and sweetness restored.

"In the work of salvaging human lives, no greater opportunity for unselfish service can be found than the helping and inspiring of those individuals who are making the fight against tuberculosis with its tremendous odds. Whether one is engaged in sanatorium or in private practice, it is a thrilling experience to have some of the choice spirits of mankind confess to you that the best thing that ever came to them was that they had tuberculosis, because through the hard schooling that the cure had imposed upon them they had learned some of the deeper lessons of life, and that life is exceedingly precious and desirable even though hemmed about by the limitations of physical weakness.

"To the busy practitioner who has never yet dared to treat tubercular patients at home, may these thoughts on home treatment open the door to some new and rich experience, and may he know some of the happiest moments of his life as he watches his patients become disciplined in mind, renewed in spirit, and strong in body!"

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**The Dangers of Iodized Salt**—Campaigning against goiter prevention has resulted in the adoption of various types of procedure by states and municipalities. Michigan, in 1924, adopted a law that all the salt sold in the state should contain a certain amount of iodine. Rochester, New York, for a period of time iodized the city water supply. Numerous cities have given iodine-containing pills to school children. There appeared to be a sense of satisfaction that the goiter problem was being solved in a simple and practical manner.

As is frequently the case public officials seize upon an idea and crystallize it into law before the complete value of the idea can be ascertained. C. L. Hartsock, in the *Journal of the American Medical Association*, May 1, 1926, draws attention to the fact that hyperthyroidism has apparently increased in some communities, with the cause, apparently, attributable to the use of iodized salt. His conclusions, as a result of the study of numerous cases, indicate that "the community use of iodine may produce, especially in adults, an incidence of thyroid disturbance of greater economic importance than the evil it is designed to abolish, and that the general use of iodine will never be free from danger unless it is supervised by the medical profession, with safe standards for the administration of this potent drug.—*American Medicine*."

Will the failure of this foolish fad teach our uplifters and health crusaders a lesson? It will not. We will go right along promoting laws, fixing standards," setting up "averages," and what-not for the wholesale practice of medicine.

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**This is the true joy in life**, the being used for a purpose recognized by yourself as a mighty one; the being thoroughly worn out before you are thrown on the scrap-heap; the being a force of nature instead of a feverish selfish little clod of ailments and grievances, complaining that the world will not devote itself to making you happy.

—Bernard Shaw.



# THE POSTURAL DEVELOPMENT OF INFANTS WITH SPECIAL REFERENCE TO THE DEVELOPMENT OF THE FUNCTION OF WALKING AND PROPER SHOEING †

By CLIFFORD SWEET \*

**N**ERVOUS energy lost, because one must live and work under a handicap, is sheer waste of human values—subtracting from creative ability and diminishing the store one has to spend on the “joy of living” after work is done. True, most of us are comfortable and are therefore satisfied with ourselves, not realizing that we go about our daily tasks carrying the weight of our own bodies at a mechanical disadvantage, which, even though it be small, when multiplied by the active hours of an average lifetime is considerable and when translated into wear and tear must hasten the decline in efficiency of the body.

Those of us who examined recruits and soldiers have a vivid memory of the faulty postures and particularly of the inefficient feet we saw among healthy young adults. Casual observance, while walking the streets or when seated in a public lobby, will bring to your attention the awkward, incorrect, and inefficient gait of almost every adult who passes. The head thrust forward, shoulders drooped to form angel wings, marked lordosis with over-prominent abdomen and buttocks, feet everted and pronated make up the prominent traits of the walking posture. In this posture only one gait is possible: the body is propelled forward in short, jerky movements with a pushing action, taking off from the inner border of the foot. This can be seen more clearly as persons walk from you on the moving picture screen and can be observed in such manner as to remove all doubts of the correctness of the observation when you are five or more stories above pedestrians and looking down directly upon them. Contrast this with the natural gait with its long swinging stride, the foot grasping the ground, pointed at least straight ahead or toeing in, taking off over the ends of the toes and the body propelled forward by the powerful pull of the thigh flexors, lifted by the even more powerful calf group with a smooth elastic movement made possible by functioning and well-developed arch muscles, and you begin to have a conception of the loss sustained in efficiency and grace of movement by the average individual.

After we began, some years ago, to scan carefully every child with reference to his posture we noticed: (1) that faulty posture was rare in young infants, while very common in older children, especially in the pre-school group; (2) that with the faulty pos-

ture of the older group went almost constantly certain deformities of the feet and deflection of the weight-bearing line in its foot to leg passage.

The infant stands in such manner as to gain greatest stability, that is, with his joints locked in a position of rest. Stability is the one essential of his upright position. His first steps are taken, maintaining this, and propelling himself forward by swaying his entire body from side to side and planting his feet forward successively by a swing of the leg. As stability increases and co-ordination of nerve muscle impulses is learned, the gait changes to that described above as the natural gait, unless the natural order of development is interfered with.

The first factor interfering with development is heredity. The individual whose inheritance gives him poor general muscular equipment easily falls into faulty posture or develops inferior methods of movement, even though his environment be good. Also the child with a congenital unbalance of one or more muscle groups is handicapped unless special education is directed toward the improvement of his inherited condition; this we see very frequently, for example, in families, several of whose members have a congenitally weak calf group. Because of this weakness, walking is begun late, the infantile method of standing and walking is continued relatively late into childhood and eversion and pronation of the feet become permanent unless proper corrective measures are begun early and carried on long enough to produce permanent results.

Next nutrition plays a most important part. If at any time during the growing period rickets is allowed to develop, deformity of some degree results. Rickets always produces not bony weakness alone, but muscular weakness as well, and all growing children develop some degree of rickets, unless proper food, sun baths and cod liver oil are supplied in adequate amounts. Acute illness with its attendant drop in nutritional state and muscular vigor often forms the basis of faulty posture or gait. Muscles that are perhaps able to hold their own under favorable conditions, lose ground even during a short illness and may not be able to regain power enough to re-establish balance unless assisted. Therefore, after all acute illness, rest should be enforced long enough to permit a return to a state of nutrition that is near normal, and any observed faults should be corrected before gaining permanence.

These general considerations are discussed that we may appropriately evaluate them in considering our broader problem. However, they do not explain the prevalence of eversion and pronation of the feet in children after infancy is passed. This fault is almost universal or so nearly so that there must be some fundamental, generally prevailing cause for it.

For several years before I arrived at my present views, correction was attempted by elevating and advancing the inner border of the heels. This is a very satisfactory procedure and, if continued long enough, produces good results. During this time I questioned every one I met who might possess special knowledge on the subject without obtaining explanations that were altogether satisfactory. The explanation most often given was that the individual had an overactive and overstrong calf group. This was found to be true in the great majority of chil-

† Address as Chairman of the Section on Pediatrics, 1926 Session, California Medical Association, Oakland.

\* Clifford Sweet (242 Moss Avenue, Oakland). M. D. University of California, 1912; B. S. University of California, 1909; M. S. University of California, 1912. Graduate study: University of California Hospital, 1912; Harvard Medical School and Massachusetts General Hospital, 1913. Previous honors: M. C., U. S. A., 1918-19. Present hospital connections: Baby Hospital, Oakland, and Fabiola Hospital, Oakland. Scientific organizations: Alameda County Medical Society, California Medical Association, American Medical Association, and California Academy of Medicine. Practice limited to diseases of children since 1919.

dren, but the fact still left unanswered the question of "Why Is the Calf Group Overdeveloped and Overactive?" We now believe the answer is in the following observations:

The normal infant's foot is broad anteriorly, the toes being well separated, the space being widest between the great toe and its neighbor. The great toe, standing separate from the rest, forms an adequate support for the mesial border of the foot, thereby preventing pronation.

Very early in childhood this type of foot becomes a rarity and we have in its stead a foot much more nearly approaching the deformed adult foot. That is, the toes are crowded together and the great toe no longer has a straightforward or even a forward-mesial direction, but is angulated more or less sharply laterally; thus it no longer supports the inner border of the foot and pronation results. This deformity is produced almost, if not entirely, by short socks and short shoes. The short sock and the short shoe force the great toe laterally, often almost to the midline of the foot and, in the plastic foot of the child, the new alignment soon becomes permanent. Ninety per cent of all our children patients are in socks that are too short and 75 per cent in shoes that are too short. A walk through a schoolyard reveals that nearly all the children are in shoes that are too short or too narrow, or both. When standing with the full weight borne on the feet, the sock should allow the foot to stretch to full length and the shoe should be long enough to make the arch of the shoe and the arch of the foot correspond.

A short sock and a short shoe compel anyone to stand and walk with the feet everted and pronated in order to release the toes from being caught between the weight thrust of the body and the confining covering. Because this is so, "Short Socks and Shoes" is a frequent diagnosis as the small patient walks into the office. His everted and pronated feet tell his story—even though he has not complained; incidentally, no child under the age of seven will make verbal complaint of his footwear. So when I say to the mother, "Your child's shoes are too short," she answers in surprise, "He hasn't said a word about it so I had not thought of it." Often, too, when this information is given her, she promptly seats him on the examining table and says, "You are mistaken, they are plenty long enough." When the child is seated, she is right, they are long enough for the relaxed foot, but when standing they are not long enough for the extended foot.

Correction of the short sock and short shoe and correction of the weight-bearing line by elevation of the inner border of the heel still left me dissatisfied. We were evidently not at the full solution of the problem. Our small patients were still everting their feet and taking off from the inner border of the foot when wearing shoes. It wasn't until they were allowed to walk barefooted that the natural gait was assumed and this last observation led me about two years ago to advise a flexible-soled or moccasin type of shoe for all infants, and I now advise its continuance up to at least three or four years of age. This advice was received with much opposition by mothers because the custom always has been to put

the child upon a stiff sole as soon as he begins walking in order to support his feet. Here again custom has some warrant in fact. So long as stability while standing or walking in the infantile manner is the only consideration, the wide firm sole is of value. But the instant the child begins to develop the function of walking, the hard sole definitely prevents the development of this function. Here as elsewhere interference with function produces in time abnormality. The child, as yet unstable and with untrained muscles, cannot raise himself over the end of the hard sole, so must of necessity take off from the inner border with the feet everted. On the other hand, in the flexible-soled shoe the foot develops its grasping power, the take-off is over the ends of the toes (as the worn soles of this type of shoe will prove) and since the inner border of the foot is longer than the outer, the natural toe-in position is assumed.

Great joy comes as one watches the child walk naturally and gracefully. It is a pleasure to watch the lithe grace of the little ones literally walking on the toes, proving that the arch is being developed by use, that the tibialis anticus and the tibialis posticus are holding their own, gaining by development a foundation that even the future onslaughts of the calf group, aided and abetted by years of fashionable heels and soles, can't entirely wreck.

In conclusion, your attention is invited to the fact that neither in standing or walking can the body posture be correct when there is an abnormal relationship between the body and its supporting structures, the feet. Pronated and everted feet mean overstrained lower legs; inward rotation of the femurs on the pelvis; lordosis with over-prominent hips and abdomen; anterior curvature of the dorsal spine with its attendant forward thrust of the head; the very postural faults that are so lamentably common.

Finally, such work as this, faithfully carried out, belongs to the physician. In carrying it out, he must give much of himself without immediate material gain, but he gains the consciousness within himself that he is making permanent contribution to the welfare of the race.

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The spiritual part of life is the substance, the temporal part is the reflection of it. Turn it the other way around and it does not work. The spirit is the master of the body. If one is in a state of spiritual health he is in a condition highly conducive to physical health. That is much more nearly true than to say if he is in a state of physical health he is necessarily in a condition conducive to spiritual health, for one may be very healthy physically and bad spiritually, and he may be very unhealthy physically for some reason, and still pretty good spiritually. But still it remains that, of the two states, the state of spiritual health is more important than the other, and more conducive to every sort of well-being.—Edward S. Martin, Harper's Magazine.

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Jesus was not, in the strict sense of the word, a social reformer. Instead of urging legislation or preaching social revolution, He contented Himself with arousing a new conscience that would itself gradually solve the problems. Indeed, the strength and power of His work lay in this very fact, that He declined to advocate specific reforms. He did something better; He set forth large principles which made reform inevitable.—Rt. Rev. Charles Fiske, D. D., Harper's Magazine.



## CARE OF THE EYES IN MIDDLE AND LATER LIFE †

By EDWARD JACKSON \*

DISCUSSION by *Walter T. Hasler, Provo, Utah; Edward F. Glaser, San Francisco.*

A SIGN of age commonly recognized and commented on is inability to read without glasses. "Old enough to wear glasses," "Can't see without glasses," are common phrases. The soft crystalline lens of childhood yields easily to the influence of its capsule, and by the natural elasticity of its fibers assumes the strongly convex shape of accommodation for near objects, when freed from the tension of its suspensory ligament. But with increasing rigidity of age it becomes less convex when released by the ciliary muscle, less able to focus near objects. The power to accommodate the eye for near seeing is first diminished, then lost. This is a universal change in the human eye that begins in early life, becomes obtrusive by the age of 40 or 45, and after that dominates all the use of our eyes. To meet it is naturally the first point in care of the eyes in middle and later life.

The wide discussion of the importance of cycloplegics in the measurement of refraction has drawn attention away from other points equally important in determining the exact focus of the eyes. It has been urged that the optician who calls himself an optometrist could not measure refraction accurately because he could not use cycloplegics, and it was assumed that, when a cycloplegic was not needed, in middle or later life, he could be trusted to fit glasses. It has been overlooked that the man whose primary purpose was to sell glasses, and whose only source of income was the regular commercial profit on the glasses he sold, could not do as good work in measuring the focus of the eye as one who only undertook to measure the focus of the eye and whose reputation and financial returns came only from his work in making such measurements.

It has been overlooked that diminished accommodation makes the accurate correction of refractive errors more important. One-half D. of astigmatism left uncorrected in an eye with 1. D. of accommodation may make more trouble than 1 D. of astigmatism in an eye with 3 D. of accommodation. Or 1 D. of hyperopia in the former may be as serious as 3 D. of hyperopia in the latter, each requiring the maximum exertion of accommodation to overcome the defect.

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\* Edward Jackson (314 Fourteenth Street, Denver, Colorado). M. D. University of Pennsylvania, 1878; C. E., 1874; A. M., 1878, and Sc. D., 1914. Union College. Practice limited to Ophthalmology since 1886. Present hospital connections: Consulting Ophthalmologist, St. Anthony's Hospital and St. Luke's Hospital. Previous honors and services: Chairman Section American Medical Association; President American Ophthalmological Society; President American Academy of Ophthalmology and Oto-Laryngology; Leslie Dana Medal; Lampert Lecture; Missouri Commission for the Blind, 1925; Emeritus Professor Ophthalmology, University of Colorado. Scientific organizations: Colorado Medical Association, American Ophthalmological Society, American Academy of Ophthalmology and Oto-Laryngology, Section on Ophthalmology, American Medical Association. Appointments: Member Colorado State Commission for the Blind. Publications: *Manual of Diseases of the Eye*, Philadelphia; *Skiascopy*; *Ophthalmic Year Book*; *Ophthalmic Literature*; *American Journal of Ophthalmology*, Denver.

It has been overlooked that damage done by eye-strain increases as the recuperative powers and nutritive resources of the body diminish with age; that results of the same strain, overuse, or indiscretion are more likely to do permanent harm after middle life than in youth; and that good vision becomes of relatively greater importance as the bodily powers fail in other directions. After middle life the accurate correction of ocular focus by glasses becomes relatively more important than in youth. It is poor policy to neglect them, or accept for their assistance inferior optical corrections. Some physicians have, for themselves and for their patients, been relying on opticians or optometrists for the correction of presbyopia, which cannot be accurately corrected until the error of refraction is exactly determined. Neglect of the needs of the eyes in later life as to glasses is neglect of reasonable care of health, aside from the important conditions recognizable under medical supervision that will determine the continued retention of good vision, or even life, to normal limits.

## THE RETINAL VESSELS AND BLOOD PRESSURE

It is generally understood that impairment of the circulation and degenerative changes in the walls of the blood vessels are the underlying causes of many diseases of later life, and frequently bring death. Increased arterial pressure is regarded as the most important forerunner and evidence of vascular degenerative change. It is the sign very generally relied on as an indication for treatment, or a basis for prognosis. But our understanding of the significance and importance of increased blood pressure is still fragmentary and maybe misleading. I was interested in hearing at this meeting that the height of the blood pressure should often be regarded as a family, sexual, or individual peculiarity. We know that increased blood pressure may be temporary, passing with its temporary cause either physiologic or pathologic. It is my impression, from comparison of the two sets of observations over some twenty years, that ophthalmoscopic examination of the retinal blood vessels gives more reliable evidence, as to the condition and probable future of the general circulation of the body than do tests of blood pressure made over a period of a few days or even of a few months.

In the retina we habitually study blood vessels of from 1/5 to 1/50 of a millimeter in diameter under an enlargement of from 10 to 20 diameters which brings out the presence, nature, and extent of alterations in the retinal vessels at an early stage, often before such vascular changes can be known or suspected in any other part of the body. The retina is an outgrowth of the central nervous system, closely allied in structure to the brain, in which many of the most serious results of pathologic changes in the blood vessels are later to be manifest. The changes in the retinal vessels may early furnish the key to the interpretation of obscure symptoms in other organs—the basis for intelligent prognosis, or the indication for treatment that, by early application, can arrest pathologic processes, prolong life

and make it more useful and pleasant through the added years.

The need for glasses with which to read and follow many of the more delicate mechanical occupations should bring every person of middle or later life under the observation of the physician specializing in ocular disease; whose medical training and associations fit him to search for and appreciate those signs of the dangers and disabilities of age that will make it possible to prevent and forestall some of the most common and serious accidents, limitations and afflictions that contribute to the unhappiness of age. Those that act through the impairment of vision are bad enough to justify a good deal of care for their prevention; and those that act otherwise than through the eye are of equal and greater importance. In the movement for better health through individual prophylaxis, the ocular examination will play a most important part.

#### CATARACT

About the causation of senile cataract we know little. We know something about traumatic cataract how it is produced, by mechanical injury. We know a little about the influence of heat in producing cataract. Experiment has thrown some light on cataract associated with tetany and diabetes. We know that the most common form of cataract is associated with advancing age; that of those who reach the age of three score and ten quite 70 per cent have unmistakable opacities in the crystalline lens. But of the underlying body changes that bring about senile cataract we know scarcely anything. With blood pressure, arcus senilis, the slower response to nerve stimuli and lessened nutritive activity it seems to have no direct connection, and with diet and elimination its connection is not clear.

But we do know that overuse and strain of the eyes hasten cataract; and we know that, of the large proportion of people who develop lens opacities by the age of 70, but few will ever be greatly disabled by them; and very few, perhaps one or two in a hundred, will ever have to face the question of operation for removal of cataract. To more people the fear of cataract is causing unhappiness, and often more serious unhappiness than does its actual presence and the limitation of activities that it causes. Two years ago I went over the histories of 539 people over 50 years of age whose eyes had lens opacities; and 108 of whom I had examined repeatedly over periods ranging from two to twenty-one years, an average of 5.6 years. From this survey the conclusion was drawn, that, on the average, the length of time that it takes for a cataract to become mature—to prevent useful vision and to require operation—is from fifteen to twenty years. Cataract beginning after 60 is not likely to mature until 80, and the later it is noticed the slower probably will be its progress. Of course cataract may develop more rapidly, as in diabetes or during attacks of influenza. But more people will be made happy by removal of the fear of cataract than by removal of cataract; although very few surgical operations have a larger percentage of good results to their credit than has cataract extraction.

Many people have partial cataract whose poor vision does not depend wholly or chiefly on the opacities of the crystalline lens. The changes which end in cataract begin with alteration of the refraction of the eye. Irregular astigmatism always arises, myopia often arises, regular astigmatism changes in amount and the direction of its meridians. Such changes may greatly impair the vision and their correction by change of glasses restore it. The eye that develops a partial cataract becomes more dependent on the kind of light it has to see by, which must be adjusted to its individual needs. Strong light striking a lens opacity in the pupil causes a diffuse illumination in the eyeball that objects have to be seen as through a fog.

In some eyes strong light contracting the pupil causes the blurring due to peripheral cortical opacities to be eliminated. In other eyes the dilatation of the pupil in a relatively feeble light will allow light to be focused on the retina, that enters the eye around a nuclear opacity. In the one case a weak solution of pilocarpin, by contracting the pupil, will help vision. In the other case a weak solution of atropin, just sufficient to give the right dilatation of the pupil, will bring a remarkable improvement of vision. For this purpose a solution of 1 to 20,000 may be sufficient. Later, or in another case, the solution may need to be ten times as strong. This must be determined by observation of the pupil and vision, under solutions of different strengths, and at different times after instillation, to determine what is the most favorable size of pupil and what proportion of atropin is required to keep it there. While mydriatics must be used cautiously in the eyes of old people, the fear of glaucoma should not prevent this use when needed. Compared with eyes that have more or less opacity of the crystalline lens, those that are in danger of getting glaucoma are very few.

#### GLAUCOMA

The danger of glaucoma is not confined to middle and later life, but it is much greater than it is in childhood and youth. Fortunately the danger of hardening of the eye is now known to physicians generally; but it is not properly met by refusing to prescribe atropin to elderly patients. An eye that is not specially predisposed to glaucoma will not get it from being subjected to a mydriatic; and if it is so predisposed will get it without any mydriatic. What the mydriatic may do is to provoke an exacerbation of high tension in an eye in which the tension is already elevated or likely to become so. Whether he puts mydriatics in eyes or not, the physician should be able to recognize glaucoma.

Early loss of accommodation used to be reckoned a sign of glaucoma, and haloes around a light seen at night may be significant. But many people lose their accommodation early who never get glaucoma; and haloes arise from various conditions in eyes that never become glaucomatous. The feeling of hardness to touch of the eyeball, and the impairment of the field of vision, are the most reliable signs of glaucoma with which every physician should be familiar. If he uses the ophthalmoscope, the "glaucoma cup" in the optic disk will also warn him of



the peril of the eye. It should also be remembered that vascular diseases of the eye and iridocyclitis often cause glaucoma, and that it may result from partial dislocation of the lens following a blow on the eye.

But the most important thing to remember about glaucoma is that treatment may arrest or prevent the loss of vision, but cannot restore that which has already been lost; or only in some cases that which has been lost very recently. Treatment should begin at the earliest possible moment, and usually the treatment will include operation. While making the arrangements for operation, or securing the patient's consent to operation, pilocarpin or eserine may be used to lower the tension of the eye as much as either will. If pilocarpin will bring the intra-ocular pressure down to normal, it is the drug of choice. But eserine is the more powerful drug, although it may provoke iritis, and should be tried in weak solutions at first. If either of these drugs contracts the pupil to the normal size, it is a good sign. But it must keep down the intra-ocular tension to normal, to be trusted any length of time.

In a few cases these myotics may keep down the tension of the eyeball until the cause of the rise has been removed, or by regular use may keep the tendency to hardening of the eyeball in abeyance over a long period. But usually the vision or field of vision continues to deteriorate and operation must be done. Sometimes a brisk purgative or enemas of strong sodium sulphate solution will reduce ocular tension and cut short an acute attack. But all these things depend on early recognition for their usefulness. To have glaucoma in mind and be able to recognize it, is the most important thing that most physicians can do to meet this danger to the eyes in later life.

#### OTHER DANGERS

Inflammation of the retina or choroid, or both, occurs sometimes in elderly people, due either to general disease or to strain from too constant use of the eyes, under unfavorable conditions. For these cases complete rest of the eyes, even in a dark room or under a light dressing, for a few days may be the first thing to attend to. But there must also be the most thorough search for probable causes for such a condition. The ophthalmoscope, by showing the character and grouping of lesions, will discriminate renal, vascular, diabetic and circinate forms of retinitis, or the presence of hemorrhage with either of these forms or due to thrombosis of the retinal veins. Other examinations will confirm the probable causation of the lesion. In any of them rest of the eyes from reading must be observed along with general regimen and special treatment of the particular condition found. In any of them the resources of the physician must be in full co-operation with the knowledge of the oculist.

#### PROPHYLAXIS

But the management of ocular disease in late life should be chiefly directed to prevention. Blindness and impairment of vision are common in later life, because of the effects of lesions acquired in earlier years, that accumulate as years go by, and because

of failure to recognize the limitations of age, rather than to conditions that truly come on and increase with age; and also on the extent and way that the eyes may be used to do what would be harmless if these limitations and conditions were carefully observed.

The eye-strain of youth, producing myopia, then will bring cataract or detachment of the retina in old age. The eye blinded by an injury that could have been prevented by wearing goggles remains blind to the end of life. But the person who has escaped such harms and used his eyes freely up to middle age must yet recognize and accept the need of glasses for presbyopia. The man who has smoked freely from boyhood must understand that in continuing to smoke as freely he is in danger of tobacco amblyopia, as well as angiosclerosis. The woman who has taken pride in her fine "fancy work" must be content to do less of it. The constant reader of other years must know that his periods of reading must be shortened. The lessened activity of nutritive processes, the diminished capacity of repair of injuries, the lessened endurance of age must be accepted if we are still to continue to be as useful and as influential in the world as we might be. It is one of the greatest of the functions of the medical profession in general to spread among the people an understanding of the real dangers and disabilities of age, and for themselves and their patients to preserve and keep fruitful what may yet be the most valuable years of life.

#### DISCUSSION

WALTER T. HASLER, M. D. (Farmers and Merchants Bank Building, Provo, Utah)—It is manifestly impossible to handle every phase of the subject announced in the time allotted for the paper read before this society. By paying close attention to every sentence read in this paper, we have a vast amount of valuable information for our use if we would apply it.

I have observed that people in middle and later life suffer a great many handicaps to their eyes through various forms of infection. A focal infection is likely to cause damage to the cornea through the production of ulcers and also inflammation of the iris and ciliary body; in fact, every structure of the eye from the optic nerve out. When one remembers how rapidly a corneal ulcer or an iritis will heal on cleaning up a focus of pus in the nasal accessory sinuses or the tonsils or the abscessed roots of the teeth, one is impressed with the importance of keeping people informed of the danger of such foci, in order to preserve their eyesight.

EDWARD F. GLASER, M. D. (391 Sutter Street, San Francisco)—It is to be regretted that Dr. Jackson's very practical and scholarly paper cannot be read by every thoughtful lay person over 40 years of age, as well as by physicians.

A tremendously important point is the necessity for the proper refraction of the presbyope whose eyes, with their lessened nutritive resources and diminished recuperative powers, can less stand eye-strain than can the eyes of youth. It has been too often assumed that because no cycloplegic was needed to refract a presbyope, any optician or optometrist could fit the correcting lenses. Dr. Jackson points out the fallacy of this assumption. The eyes in middle and later life need, if it were possible, even better and more careful refraction than that we give to youth.

In these days of the emphasis of the prevention of disease, should not every presbyope, as a routine of being given "glasses to read with," have a thorough examination of his fundus, his tension and field of vision taken and the periphery of the crystalline lens examined, as

well as the center seen through a small pupil. That is, the fitting of the proper glasses at all ages, and especially in middle and later life, is a definite medical problem and should only be done by the trained ophthalmologist, who can eliminate as factors in the defective vision various pathologic conditions which may be insidiously beginning if not already present.

Attention must be called to Doctor Jackson's "impression" that ophthalmic examination of the retinal blood vessels gives more reliable evidence as to the condition and probable future of the general circulation than do tests of blood pressure made over a limited time. Which, in the prevention of disease work, emphasizes the importance of the study of the retinal vessels during middle and later life, and the immediate consideration of the "presence, nature and extent of alterations" seen there before such vascular changes can be known or suspected in any other part of the body.

Doctor Jackson's paragraphs on cataract are most instructive. Of especial interest are his remarks on the causes of poor vision in incipient cataracts, his study of the effect of light in partial cataracts and use of pilocarpin or atropin, as case indicates. To be quoted is his conclusion that "more people will be made happy by removal of the fear of cataracts than by removal of cataract."

In his conservative remarks on glaucoma, the author emphasizes immediate diagnosis and treatment "at the earliest possible moment, and usually the treatment will include operation."

Since of all the God-given senses vision is the most important from the social, economic, intellectual, and pleasure-producing points of view, conservation of vision needs especial emphasis during middle age and later life, when the other physical limitations are gradually developing. So Doctor Jackson's remarks on prophylaxis and prevention are most timely and valuable.

**A Standard for Pituitary Extract**—One of the pleasing features of the Tenth Revision of the U. S. Pharmacopoeia is the inclusion therein of a definite standard of activity for pituitary extract. Inasmuch as pituitary extract is best known as an oxytocic, it is the effect of the extract upon the uterus of a virgin guinea pig that constitutes the official test. Some manufacturers, however, among them Parke, Davis & Co., apply the pressor or blood-pressure-raising test as well, since pituitrin (pituitary extract, P., D. & Co.) is administered for its effect upon the arterial system in hemorrhage and other conditions, and for its regulating effect upon both the intestinal musculature and the musculature of the bladder. It is impossible for the physician to judge of the activity of a pituitary preparation by physical examination of it. Manufacturing methods have made it possible to produce pituitary extracts not only far below the standard, but far above it; hence the urgent necessity of the pharmacopoeial requirement in the interest of definite dosage. In this case, however, as in many others, the physician is dependent upon the manufacturer not only because he himself has none but clinical means of testing the activity of the product, but because the products of different houses vary, and possibly also the product of the same house at different times. A manufacturing concern of recognized scientific standing is really the only guaranty of quality that the physician has.

There is, of course, no doubt that oral sepsis is often intimately associated with that condition known as "poisoned heart" and is a factor in its causation of the first importance. As to whether septic conditions of the mouth are secondary to those of the gastro-intestinal tract is still a moot point. Many believe that the origin of a great deal of oral sepsis is gastro-intestinal disorders and intestinal stasis in particular. However, it is certain that oral sepsis aggravates bad gastro-intestinal conditions and vice versa. A vicious circle is formed which can be broken only by rational means.—M. J. and Record.

An Indiana judge has ruled that in future truancy cases he will sentence the parents to one day in the county jail for each day their children miss school without good reason.

## FAVUS

By KENDAL P. FROST AND GEORGE F. KOETTER \*

*The geographic distribution of favus is peculiar. It is common in France, Scotland, and Russia. In the United States it is not infrequently seen in immigrants, but is very rare in natives. Favus of the scalp in adults, especially natives of the states, is excessively rare. We wish to call your attention to this case of favus in an adult resident of California.*

DISCUSSION by Ralph R. Campbell, Los Angeles; George D. Culver, San Francisco; Hiram E. Miller, San Francisco.

E. R. I., age 45, was seen on February 5, 1925, complaining of scalp trouble of three and one-half years' duration. He was born in Virginia and has resided in Massachusetts, Wyoming, and for the past fifteen years in California. He thinks the condition was contracted from a person who used his comb and brush. Within ten days he noticed an itchy area in the occipital region, and following this many new similar areas appeared, scattered throughout the scalp, in spite of vigorous applications of proprietary preparations.

The patient describes the initial lesions as: "A small pustule forms around the hair. After several weeks it grows wider and deeper, and a thick crust forms. The lesions last months, and there is a constant increase in their number. Several crusted areas in the scalp had a tendency to conjoin. The sensation is one of burning and itching. On the nape of the neck some relief was obtained by extracting the hair, but this did not stop the scab formation." The areas in the scalp are remarkable for their crust formation and duration, and in no bald areas has there been any regrowth of hair. In the infected areas the hairs were easily removed, and without sensation.

**Examination**—Careful search failed to reveal any scutula, although the entire scalp was covered with a thick, brownish, greasy scaliness. No mousy odor was detected because of the constant application of creolin. Scattered throughout the scalp were many discrete, irregularly shaped, sharply defined, pea- to dime-sized depressed areas, covered with a thin pink, glistening, atrophic scar, and totally devoid of hair. Interspersed were tufts of hair that had survived the attack.

In right eyebrow and bearded region, at angle of jaw, were dime-sized areas, erythematous, tender, with loss of hair, bathed in pus and covered with a thick, firm crust. On removing the crust there was a depressed, moist, bleeding surface, but no scarring present.

On the nape of the neck there was an irregular-shaped patch, slightly depressed, about 2.5 by 7.5 cm. covered with a thin, glistening cicatrix. At one end of this patch there was a dime-sized area of activity with crusting, moisture, and tenderness. On removing the crust there remained a raw, bleeding surface. There was no involvement of the nails.

\* Kendal P. Frost (523 West Sixth Street, Los Angeles). M. D. Rush Medical College, 1916. Practice limited to Dermatology and Syphilology.

\* George F. Koetter (831 Pacific Mutual Building, Los Angeles). M. D. University Cincinnati. Practice limited to Dermatology. Hospital connections: St. Vincent's, Children's Hospital, Los Angeles.



**Cultures**—Scales and hairs were soaked in alcohol for several hours, then transferred to acid agar and Sabaroud's media and grown in the dark at room temperature. No fungus could be cultivated, the growths being mainly secondary contaminants. Scales and hairs soaked in 15 per cent K O H revealed abundant, branching mycelia and spores.

**Treatment**—On February 9 the patient received an epilating dose of x-ray following the technique of Adamson-Kienbock. Fifteen days later there was beginning epilation and practically no tenderness in the active areas. One month after the x-ray exposure there was almost complete epilation. At two months all areas had healed over, with the exception of large area on nape of neck.

A 3 per cent ammoniated mercury ointment was applied to the scalp daily, beginning six weeks after epilating dose of x-ray. At present all lesions have completely healed with scar formation, except a dime-sized area on the nape of the neck. This area constantly crusts over, but no spores or mycelia are demonstrable.

#### DISCUSSION

RALPH R. CAMPBELL, M.D. (Brockman Building, Los Angeles)—Frost brings this matter to our attention because it is an unusual condition to find in an American-born. It is decidedly unusual for favus to appear for the first time at the age of Frost's patient, namely, 42 years.

Hutchinson claims that, of a series of forty-four cases, he has never seen but one that first presented later than the fifteenth year of life. This one exception was 17 years old when first presenting himself for treatment.

Favus occurs in both sexes, but decidedly more frequently in the male and may involve not only the scalp, but any portion of the body. The progress of the malady is exceedingly slow, so that months often elapse before there is much involvement, the disease sometimes limiting itself to an irregular area of one or two inches in diameter. Not infrequently, while the first patch increases gradually, new foci show themselves in one or more, near-by or remote parts of the scalp. In some instances, especially near the border of the crusts, are seen pustules or suppurating points.

Frost calls attention to the fact that there was no scutula in his case, which in my experience is rather unusual, for these scutula, or crusts, usually form to a greater or less degree before the pustules appear and sometimes present themselves in rupoid shape.

A mistake in diagnosis is easily made as between favus and seborrhea, the latter giving off a greasy scale if pressed between two sheets of tissue paper, while the same procedure with favus will not leave any evidence of having been treated in this way.

We hope that the day is not far distant when the physician at large will realize more fully than now the importance that dermatology plays in the practice of medicine, and digest the fact that the general physical condition of the patient cuts a very large figure in the treatment or management of almost any skin disease.

While we are on the subject of favus it might not be amiss to renew attention to a few facts with reference to the hair and the scalp generally.

Certain diseased changes in the hair have for some time been recognized as due to the action of grosser parasitic micro-organisms, as in ringworm and favus; in other conditions, as in dermatitis seborrheica, the disturbance in the nutrition of the hair is believed to be caused by the presence of smaller organisms, as cocci, and some have claimed a parasitic cause of alopecia areata; in others, as in folliculitis decalvans and dermatitis papillaris capilliti, the loss of hair is due to pus organisms. All these are excluded from the present consideration.

But there is a much larger and very important group of disturbances of the hair which are caused by derangement of nutrition and innervation going on within the

follicle, which it is well to consider from a broad point of view. We all know that certain physiologic states of the system are attended with conditions relating to the growth, atrophy, and changes in color of the hair, and we can thus readily understand how pathologic conditions can induce similar or dissimilar alterations in the hair structure.

That we do not yet fully comprehend all the reasons for this, nor the exact methods in which they occur, is no reason for our not seeking to understand the relationship of these affections, or some of the causes which are apparently connected with them.

GEORGE D. CULVER, M.D. (323 Geary Street, San Francisco)—It is the unusual that often lends greatest interest to a case report. Frost and Koetter's excellent report of a case of tinea favosa has that feature as originating in the United States, and as being of the scalp of a man over 40 years of age. I have never seen an instance with a similar history. However, one might wonder there aren't more, since every immigrant with favus has the potential element of contagion with him. The fact that it was in a man who must have been over 40 before he noticed the condition is rare. Just how long the condition might have been present before he was conscious of it is a question.

We do know that the unusual does occur in skin affections, and especially conditions due to parasites. The fact that favus has such a tendency to persist would seem to indicate the possibility of its affecting the adult scalp even more frequently than we see it in this country, and even more than would the ordinary fungi found on the scalp in children.

The chronicity of fungus infections gives us a lot to think about, whether it be tinea of the scalp, tinea barbae, or the more prevalent epidermophyton inguinale infection. Always the question arises as to why the individual selection. It will some time be one of the most important factors to be considered.

HIRAM E. MILLER, M.D. (384 Post Street, San Francisco)—Favus is a rare disease in California. It is frequently encountered in New York City in immigrants, but they seldom reach the West. I have seen three cases in the University of California skin clinic. They were all in adults who had contracted the disease outside the United States during childhood. They came to the clinic for other complaints, and the favus infection was discovered on routine examination. They, like many of their immediate forebears in Europe, had learned to accept the disease as one of little consequence and refused to have it treated. The fungus was easily demonstrated and grown in all three cases.

Frost and Koetter's case is unique in many ways. It was contracted in California; it was in an adult 42 years of age; it had run a rather rapid course for favus; there was considerable pus in many of the lesions, and there was no mousy odor or scutula present. In view of the fact that the diagnosis was mainly made on the microscopical picture of the fungus, I think it would be worth while if they would describe it a little more in detail.

DOCTORS FROST AND KOETTER (closing)—In answer to Campbell's and Miller's question, the patient never allowed crusts to remain on lesions long enough for the formation of scutulae. We believe this is the reason for absence of these lesions. In the microscopic picture there were many irregularly shaped, branching mycelia.

The new era in medicine which the physician of the future must be prepared to enter must rest on the foundation of a wide and comprehensive plan of personal and public health education. Professional policies, narrowly conceived, can never successfully oppose the rightful interest of the public. The failure properly to educate the public regarding the achievements of medicine and its importance in the preservation of life and the prevention of sickness may be considered as such a policy.—Wendell C. Phillips, M.D., Journal A. M. A.

Emerson, the Indiana University Medical School, says that disease is necessary to give the body practice in gaining immunity. To an unscientific mind this sounds like the old lady who kept a horse for the sole purpose of going after the oats.—Howard Brubaker.

## THE OPERATIVE TREATMENT OF RUPTURE OF THE MALE URETHRA

By FRANKLIN FARMAN \*

DISCUSSION by Arthur B. Cecil, Los Angeles; Miley B. Wesson, San Francisco; Granville MacGowan, Los Angeles.

THE operative treatment of rupture of the male urethra may be divided into two phases, the first having to do with the surgical problem arising from urine retention and extravasation; and the second having to do with repair of the urethral injury. This discussion is limited more to the treatment of injuries of the posterior urethra caused by stricture formation and its attendant misfortunes, and does not embrace a discussion of traumatic rupture, although the surgical principles involved are much the same.

### DISCUSSION OF THE TREATMENT OF URINE RETENTION AND EXTRAVASATION

Rupture of the posterior urethra, from any cause, becomes immediately a serious problem because of the danger of urine retention, extravasation, and infection. A review of the literature places the mortality in such cases anywhere from 20 to 50 per cent, depending upon the site of injury. Sir Benjamin Brodie, in 1849, stated that "the danger from effusion is not the same in all cases. In the majority, the effusion takes place in front of the triangular fascia of the perineum, or else the fascia gives way and allows the urine to pass forward to the superficial parts instead of penetrating to the deep-seated; and under these circumstances life may generally be preserved by the prompt interference of the surgeon. In a very few cases the effusion extends into the loose, cellular membrane which surrounds the bladder, and the patient's condition is hopeless."

Early diagnosis, an appreciation of the gravity of the situation, and prompt operative interference are necessary to forestall or mitigate the septicemia and combat the uremia. Delay is dangerous, and one should always remember that the general symptoms of rigor, delirium, or coma may mask the true local condition.

In contradistinction to traumatic cases, the extravasation is not necessarily confined to those planes defined by the anatomist. The infected, extravasated urine invites infection and suppuration, which breaks down anatomical barriers, permitting infiltration of the deep, as well as the superficial tissues.

### ROUTE OF EXTRAVASATION OF URINE

Extravasation through an opening in the bulbous urethra seeks first the superficial perineal tissues in front of the anterior layer of the triangular ligament. From the perineum, the extravasation spreads to the scrotum, guided in this direction by the deep layer of Colles' fascia, and thence to the abdominal wall through the opening left between the pubic

spine and symphysis. Extravasation between the layers of the triangular ligament results from rupture of the membranous urethra and soon breaks the confines of this limited space, spreading, then, either to the ischio-rectal fossae or into the perineum. Extravasation, posterior to the deep layer of the triangular ligament, usually results fatally because of involvement of the peri-vesical and perirectal structures.

Frequently, extravasation proceeds more rapidly on one side than on the other, due to the fact that the perforation has occurred in the lateral wall of the urethra. The usual site of injury is the floor, or lateral wall of the urethra, in its bulbous or membranous portion. The roof, or so-called surgical wall, of the urethra is rarely ruptured except in very severe traumatic cases.

### CHOICE OF OPERATIVE PROCEDURE

There are three methods of operative procedure available in attacking a case of rupture of the deep urethra associated with urinary extravasation. The main consideration is to relieve intra-vesical tension and to admit free escape of urine and inflammatory products.

*Method I*—Multiple incisions only of the peri-urethral abscess and infiltrated areas. Sometimes a simple incision of the abscess in the perineum performs, as it were, an external urethrotomy, permitting the free escape of urine and pus. However, if the opening in the urethra is small and laterally placed, simple incision will not relieve the retention and pressure behind the stricture and injured urethra.

*Method II*—Multiple incisions combined with suprapubic cystotomy. This method is recommended by some writers, and in recent years has gained increasing favor. Relieving acute retention and diverting urine by this route is applicable, especially to the early case. It has the added advantage of retrograde catheterization in cases of impervious urethra. Furthermore, it permits of free inspection of the bladder cavity for possible stone or vesical neck obstruction.

Drainage through a suprapubic cystotomy opening secures for the damaged parts rest and cleanliness, promotes prompt resolution, and encourages softening of cicatricial deposits in case of stricture.

The disadvantages of suprapubic drainage are, first, the danger of deep pelvic cellulitis in the cave of Retzius, brought about by a cystotomy incision traversing infected, superficial planes; and second, depression of renal function to a fatal termination in cases of badly damaged kidneys.

*Method III*—Multiple incisions combined with perineal cystotomy. By many this is considered the method of choice. It provides free bladder drainage with a minimum of shock or hemorrhage, relieves tension fully, and minimizes the danger of deep pelvic cellulitis. The operation is carried out with or without the aid of an urethral guide or staff. In cases of impervious urethra, the median perineal section is made, based upon a knowledge of anatomical landmarks and relationships.

The dangers of the operation are injury or un-

\* Franklin Farman (1501 South Grand Avenue, Los Angeles). M. D. Rush Medical College, 1917. Practice limited to Urology. Hospital connections: California-Lutheran, Anita Baldwin and Hollywood Hospitals, and Graves Memorial Dispensary.



controllable hemorrhage of the bulbous spongiosum, perforation of the rectal wall, or failure to find the proximal end of the ruptured urethra. Incision, or injury to the bulb, in some cases results in subsequent impotency.

#### TREATMENT OF THE INFILTRATED TISSUES

The infiltrated tissues are treated by multiple incisions. Fewer, but larger incisions, are recommended by Barley and Huddy. The incision should be of sufficient depth to penetrate the limiting fascia.

#### AFTER-TREATMENT

The immediate post-operative treatment is very important. With relief of urine retention, further extravasation ceases, but there still remains the danger of spreading cellulitis. This can be partially prevented by the injection of hydrogen peroxide into the infiltrated tissues to destroy the anaerobic organisms responsible for the cellulitis. The septicemia, uremia, and renal depression are best combated by the administration of fluid, subcutaneously or intravenously, to dilute the toxins and stimulate elimination.

Hot, moist dressings and, as soon as the patient's condition permits, Sitz baths hasten absorption from the infiltrated parts. Repair of the perineal fistula should not be undertaken until all infection has subsided.

*Repair of Perineal Fistula*—The success and technique of closure of perineal urethral fistulae depends upon the size, location, and complications. Small fistulae tend to close spontaneously as soon as infection and inflammation subside. Closure frequently can be hastened by the passage of sounds at intervals. Obviously, stricture or tortuosity of the urethra, distal to the fistulous opening, retards or prevents closure—consequently, these conditions must be treated by proper urethral instrumentation.

Larger and persistent perineal fistulae require operative repair, the technique of which covers a wide and difficult field of plastic surgery. The salient features of the surgical treatment in general are: (a) Removal of the cause; (b) restoration of the impaired urethra; (c) provision for bladder drainage during the repair of the defect; (d) control of infection or active inflammation before beginning any operation of repair. Drainage of the bladder during the healing of the plastic operation for the restoration of the urethra is especially important. The method of drainage employed, whether by retention catheter or suprapubic cystotomy, seems to be as much a matter of personal choice as of established rule, as successes are ascribed to both methods. Many ingenious methods have been devised for restoration of the fistulous urethra, including auto-plastic and hetero-plastic procedures.

A commonly employed technique for the closure of a simple perineal urethral fistula, is by excision and suture. With a urethral sound or catheter in position, the fistulous tract is carefully dissected free down to the urethra and excised flush with the lumen. The opening in the urethra thus left is closed by interrupted non-penetrating sutures of fine chromic catgut. The perineal incision is carefully closed by tier approximation and a small drain

carried to the center of the wound. Provision is made for temporary bladder drainage, either by retention catheter or suprapubic cystotomy, or both.

Large defects in the urethral wall can be closed in the above manner if the lips of the urethral wound are barely approximated with interrupted sutures, not tied under too great tension. The urethral mucosa regenerates rapidly and quickly spans the gap, if infection and inflammation are absent and the urinary flow is diverted.

Following restoration of the urethra, it is important to prevent subsequent stricture formation by the passage of sounds at regular intervals.

#### CASE I. *Peri-urethral abscess. Perineal fistula. Ureterorrhaphy.*

*History*—Mr. R., age 50 (referred by E. A. Huff), was admitted to the hospital April 4, 1924, exhibiting the major symptoms of peri-urethral abscess, extravasation of urine, and vesical retention. There was moderate shock, rigor, and pain, better described as "agony." The immediate past history disclosed recent unsuccessful ure-



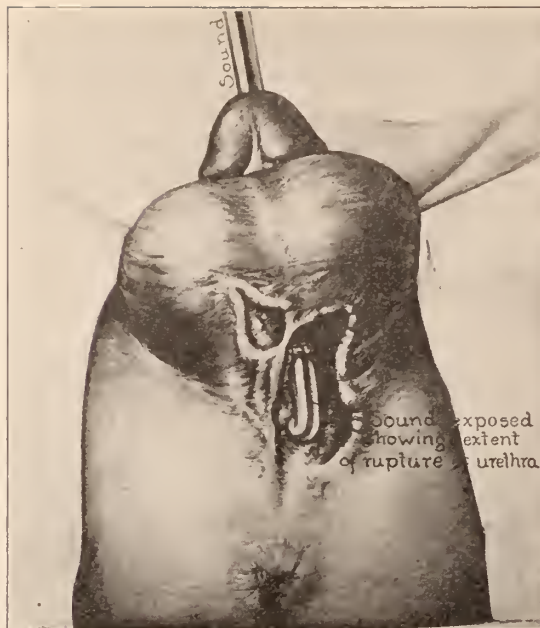
No. 1. Case I—Perineal slough, extending to deep urethra following extravasation of urine.

thral instrumentation followed by progressive pain and swelling in the perineum, increasing difficulty and gradual diminution of the urinary stream, until finally complete stoppage occurred the day of admittance. Medical history included a gonorrheal infection at the age of 20, and intermittent treatment during the past seven years for stricture.

*Physical examination*, aside from the findings characteristic of moderate shock and approaching uremia, showed the bladder distended to a point about two-thirds the distance to the umbilicus, moderate edema, bluish discoloration of the scrotum, and marked tumefaction and infiltration of the tissues of the perineum at the base of the scrotum, pointing just to the left of the midline. The prostate was greatly swollen, four times the normal size, tender, but not fluctuant. Subnormal temperature at time of admittance rapid, weak pulse, and a leucocytosis of 45,000, with a differential count of 90 per cent polymorphonuclear.

*Operation*—Immediate operation for the relief of the acute retention was undertaken. Morphine with atropine was administered, which, in his state of toxicosis, was sufficient to produce anesthesia. A filiform, followed by a Le Fort catheter No. 14, was passed easily and 500 cc. of foul, bloody urine, withdrawn. Next, a wide, deep incision was made over the point of prominence in the perineum. Through this incision the finger could be guided through the prostatic urethra into the bladder, performing external urethrotomy. A rubber tube was inserted for drainage. Eight hundred cubic centimeters of normal saline was administered by hypodermoclysis while still in the operating-room, which procedure, in his case, I feel was life-saving. Hypodermics of digifoline and normal saline per rectum were given for the next forty-eight to seventy-two hours.

Improvement was rapid, the signs of uremia disappeared, and the only symptom causing alarm was the



No. 2. Case I—Sound exposed, showing extent of rupture of the urethra.



No. 3. Case I—Sagittal section, showing route of extravasation of urine from rupture of the deep urethra.

persistence of intermittent attacks of hiccough for three days. All the urine drained through the perineal opening. The bladder was irrigated every few days with warm boric solution through a Le Fort catheter passed upon a filiform.

Within two weeks following the perineal incision, the tissue slough about the wound separated, leaving a deep cavity at the base of the scrotum extending to the deep urethra.

At the time of discharge from the hospital, eighteen days after admittance, the perineal wound was gradually filling in with healthy granulations, all the urine escaping through this fistula.

**Ureterorrhaphy**—One month later the patient returned to the hospital for repair of the perineal fistula. The operative findings showed the sinus to involve the posterior wall of the bulbous urethra, just distal to the membranous urethra. The rent in the urethra was about one inch in length and one centimeter in width.

The plastic repair of the urethra was accomplished by widely exposing and dissecting free the lips of the sinus, uniting the torn edges of the urethral wall with interrupted, fine chromic catgut sutures tied over a soft rubber catheter, F. 19. It was barely possible to bring the lips of the fistula together because of the extent of loss of wall and the inelasticity of the urethra. The urine was diverted through a suprapubic cystotomy opening.

Convalescence proceeded satisfactorily, with the exception of a urethral chill one week after operation, which was followed by diarrhea, lasting five days. The suprapubic drainage tube was removed two weeks after operation and the indwelling urethral catheter one week later, following which the patient voided normally, but with the escape of some urine through the perineal wound.

**Result**—Sounds were passed at irregular intervals, control of urination returned, and the perineal sinus closed, with the exception of a minute opening, which continued to dribble a few drops of urine with each act of urination for five months.

The patient has a sense of numbness in the penis and scrotum, and there is complete loss of erectile power. His general health, weight, vigor, and earning capacity are better now than at any time during the past few years.

#### CASE II. Fatal extravasation of urine.

Mr. B., age 46 (referred by J. P. Mortinsen), November 13, 1924. History of long-standing, chronic urethral and bladder disturbance, due to stricture. Ten days before I saw him, under ether anesthesia, a small cyst en-

closing a stone had been removed from the shaft of the penis, near the base. At the same time, a No. 24 French sound was passed without any apparent difficulty, except a sense of tightness in the deep urethra. An indwelling urethral catheter was inserted. The catheter drained urine satisfactorily for a few days, and then ceased to function. Gradually there appeared swelling, redness and infiltration of the scrotum, penis, and perineum. The infiltrated tissues were incised and drained, but the patient's general condition grew worse and the



No. 4—Gangrene of genitalia, following urinary extravasation.

local genital infiltration spread to the left abdominal wall, groin, and back.

**Physical Examination**—Man about 45 years of age, of medium stature and frail build. Facies drawn and pallid; tongue dry and parched. Subnormal temperature; rapid, weak pulse, 120 per minute. Locally, there was marked swelling, discoloration and infiltration of the



genitalia, perineum, left groin and abdomen, which extended around to the back. There was a sloughing, discharging wound of the perineum, and a gangrenous ulcer on the penis, the site of the excised cyst. The prostate was moderately enlarged, swollen and tender; base of bladder, boggy and sensitive; marked distention of abdomen, with tympanites throughout.

**Operation**—Under ether anesthesia, a suprapubic cystotomy was done. Purulent fluid and serum escaped from the tissues upon incising through the recti muscles. The stylet of the indwelling catheter was found to be approximating the fundus of the bladder, which probably accounted for the poor bladder drainage. This was left in situ and adjusted to proper position. A large amount of purulent urine was washed from the bladder cavity. The inner wall of the bladder was heavily trabeculated, denoting long-standing urine obstruction.

Multiple deep incisions were made in the infiltrated tissues of the left abdomen, perineum, and genitalia. Purulent, fecal-like material escaped from these wounds. One liter of normal salt solution was given subcutaneously while the patient was still on the operating-table. Pulse rate at the close of the operation was 140 per minute. The patient died eight hours following the operation. An autopsy was not obtained.

**Diagnosis**—Extensive extravasation of urine into the superficial and deep tissues of the perineum, genitalia, groin, and left abdominal wall; rupture of the posterior urethra, either in its membranous or bulbous portion; acute retention of urine; and overwhelming septicemia and uremia.

#### DISCUSSION

ARTHUR B. CECIL, M. D. (Pacific Mutual Building, Los Angeles)—The treatment of rupture of the male urethra is one of the most individual of treatments. The condition is usually due to one of two things: slow extravasation of urine back of an almost impassable stricture or acute extravasation of urine due to a fall in which the urethra is crushed against the pubic bone.

To first discuss ruptures and extravasation back of tight strictures: These patients are usually much more seriously ill than one would think at first sight. They have had kidney damage, as a rule, and also, as a rule, the urine is infected. Following almost any kind of manipulation they react badly, and I am extremely fearful of many cases of tight stricture, particularly where rupture and extravasation have occurred. If the extravasation is great, incision of the tissues is necessary, but if the extravasation is not great, and if one can dilate the stricture by filiforms and followers enough to introduce a small drainage tube into the bladder, subsidence of the local condition will usually occur.

Extremely persistent perineal fistula may follow incisions of the urethra back of the strictures, so that I feel that if the condition can be handled by catheter in the urethra a great deal is to be gained. The important thing in these cases is to bear in mind the seriousness of their general condition.

In the cases of rupture of the urethra, due to trauma in the perineum, if a retention catheter can be put into the bladder early it is probably one of the best methods of treatment.

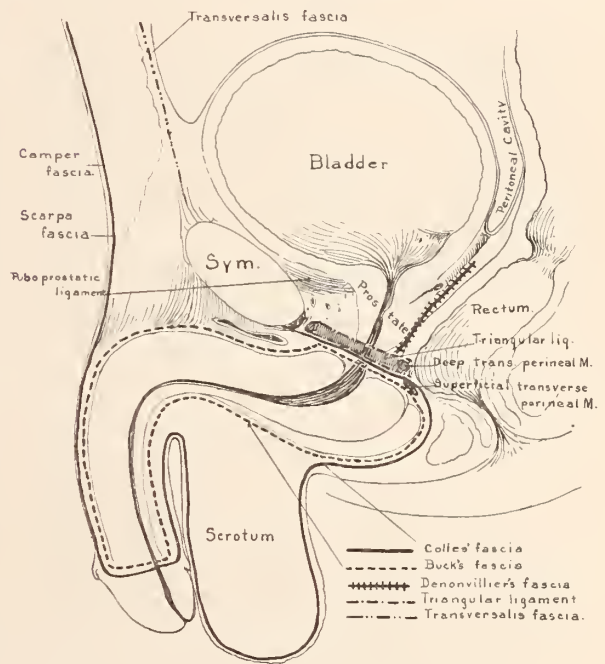
A few years ago I reported a case of this kind in the *Journal of Urology* in which a man who had fallen across a beam had developed in the perineum a very large sac-like formation in the perineal urethra. The patient urinated into this sac, then by manual pressure squeezed the urine from the sac out through the urethra. At operation, a mucous-lined sac as large as an egg was found, into which the bulbous urethra projected. A plastic operation was done in which urination was normally established.

Doctor Farman's splendid care of these two patients shows the great ingenuity one must display in caring for conditions which are so multiple in their manifestations.

MILEY B. WESSON, M. D. (1275 Flood Building, San Francisco)—This paper is very valuable, as it represents one of the few contributions to the literature of the subject of urinary extravasation incident to rupture of the urethra. The condition is one of the most complicated that comes to the urologist's attention, and its treatment

calls for the rarest skill and judgment, as indicated by the all too frequent fatalities that follow unscientific therapy.

Three types of urinary extravasation are commonly encountered: between the layers of Buck's fascia; within the superficial perineal space and distal to the deep layer of the urogenital diaphragm. If the rupture occurs anterior in the urogenital diaphragm, and the opening is through the dorsum of the corpus spongiosum, the fluid is confined between the layers of Buck's fascia surrounding the corpus cavernosum. However, the common pathway is ventral and the urine is confined temporarily by Colles' fascia, and because of the dense fascial partitions within the superficial perineal interspace, the fluid tends to pass from the perineum down to the scrotum and then up over the pubes. In early stages, the extravasation is unilateral; later, both sides of the scrotum, as well as the penis, down to the glans are involved, and the fluid may pass up as far as the axilla. If the rupture occurs distal to the urogenital diaphragm, the extravasation is held forward by Denonvilliers' fascia and, by dissecting up the peritoneum from the bladder, passes into the space of Retzius, or it may extend posteriorly up to the diaphragm and eventually even pass through the inguinal rings and appear on the abdomen. (The diaphragm graphically illustrates the circumscribing fascia.)



Although extravasation is commonly considered as a complication occurring after rupture of the urethra by external violence or periurethral abscess, it is not unusual to find it following the unsuccessful passage of a sound or even a velvet eye catheter on a stylet. The point of the stylet tends to slip through the eye of the catheter and penetrate the space of Retzius, the weakest portion of the urethra being the roof immediately behind the triangular ligament. When force is used in passing a sound, a slight tear is often made in the wall of the urethra. This heals spontaneously unless a solution of potassium permanganate is used afterward as an irrigation, in which case there is inevitably a slough and extravasation.

Any case presenting the inability to void should be considered an emergency and operated upon immediately, for if extravasation is not relieved death always results from sepsis. The use of a retention catheter should be restricted to those cases that can void, i. e., cases of partial rupture. In cases of complete rupture, even if a catheter can be passed, a practically unmanageable stricture results, while repeated unsuccessful attempts cause false pockets and increase the variety of infection organisms. An external urethrotomy should be the routine

procedure, reserving the suprapubic incision for cases complicated by rupture of the bladder.

Wherever there is urine beneath the skin it must be evacuated. Only a few years ago "bold" incisions through the skin and fascia were made, and this relieved the beginning cellulitis. However, after the patients were well from the effects of their extravasation, skin grafting was necessary to cover the exposed granulating areas, due to the retraction of the skin. In order to avoid this latter maneuver, gridiron incisions came into popular favor; no cuts were longer than one inch, but the cuts were only one inch part. These incisions, of course, are of no value unless a finger is slipped down into each incision and the region beneath connected by means of this blunt dissection.

I have obtained the best results with Dakin's solution, using many tubes and frequent injections. In large incisions dichloramin-T is easier to use than the Dakin's solution. After the acute condition has disappeared or the Dakin's is beginning to burn the skin, 5 per cent mercurochrome solution is substituted. Hypodermoclysis of not less than 3000 cc. of saline is used routinely immediately after operation, and this is repeated daily as long as indicated and without any fear of incommoding the circulatory system.

If following the removal of the perineal drainage tube the patient has a sudden elevation of temperature, the tube must be replaced immediately as a secondary extravasation is occurring, the fistulous tract not retaining its continuity. Incidentally, the tube cannot be replaced with the patient lying prone. He must be placed in the extreme lithotomy position used when the tube was first inserted.

During the war I saw at an evacuation hospital near Verdun a patient who had been wounded in the perineum. When a catheter was passed intra-urethally into the bladder, it was visible through the frayed urethra at the bottom of the perineal wound. The shrapnel had done a perfect debridement (i. e., because of the great circumference of the wound, it was relatively shallow and there were no pockets). At the end of seventy-two hours, the bottom of the wound was filled with granulation tissue, so that the patient voided without any perineal leakage. As he was immediately evacuated to a railroad, I lost track of him and do not know, but I presume no fistula followed.

Urethral mucosa grows with such amazing rapidity, that grafting or approximating the cut ends is by many considered unnecessary. When a prostatectomy is done, practically the entire mucosa of the posterior urethra is removed along with the tumor. The surgeon is not interested in the preservation of the mucosa, but rather in the removal of all loose strands of mucous membrane that might eventually cause obstructions to the lumen.

Ordinarily, in cases of ruptured urethra, if bladder drainage is provided and the two ends of the cut urethra are placed as near together as possible so that a sound will readily pass to the bladder, nothing need be feared as to the ultimate result.

The drainage should be, unless otherwise indicated, by indwelling catheter with continuous suction. This will, as a rule, prevent the passage of urine around the catheter. There is necessarily a certain amount of maceration between the walls of the urethra and the catheter (which remains in position about two weeks), and this causes the stitches to slough. Five per cent mercurochrome should be injected daily into the bladder, so that if there is any leakage about the catheter it will be sterile.

Doctor Farman is to be congratulated upon the successful way in which he treated the first patient and the scientifically accurate method of treating the second.

GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles)—The treatment of rupture of the male urethra, if the results to be obtained are to be worth while, requires boldness, good anatomical knowledge of the perineum, resourcefulness, and patience. The subject is entirely too extensive to be covered in any short article or to be discussed intelligently in a few words.

It is only in large industrial centers or in general hospitals that enough material ever gets into the hands of any one man for him to reasonably and intelligently master the subject of the handling of these cases.

I have been much interested in Farman's report of his

case of Mr. R, age 60, and I congratulate him upon a very excellent result obtained by his treatment. The only thing in his article which definitely calls for criticism is paragraph 6, "After-treatment," where he states: "The immediate post-operative treatment is very important. With relief of urine retention, further extravasation ceases, but there still remains the danger of spreading cellulitis. This can be partially prevented by the injection of hydrogen peroxide into the infiltrated tissues to destroy the anerobic organisms responsible for the cellulitis." This is a doctrine which is dangerous. Hydrogen peroxide does not destroy any malignant organisms, but because of the manner in which it spreads through the tissues by reason of its release of the oxygen, it tends to spread the disease and not to check it. It has been many years since I have known anyone to advocate the use of hydrogen peroxide for this purpose. Years ago, when the mistaken idea of its disinfecting and cleansing powers had great hold upon the profession, such a doctrine would have been regarded as orthodox.

## ELECTRO-DESICCATION AND ELECTRO-COAGULATION AS A MEANS OF DESTROYING BENIGN AND MALIGNANT SKIN LESIONS

By ERNEST K. STRATTON \*

*Electro-desiccation destroys skin lesions with comparatively slight trauma to the tissues; therefore, a minimum amount of scar formation results. This, as well as its use in the treatment of lesions of the tongue and mucous membrane of the buccal cavity, is of special importance to the dermatologist.*

*Electro-coagulation destroys malignant lesions in a rapid and effective manner with a minimum amount of harm to the surrounding tissue, sealing the blood and lymph channels, which lessens the likelihood of metastasis and makes the operation bloodless.*

DISCUSSION by Harry E. Alderson, San Francisco; Ernest Dwight Chipman, San Francisco; J. Cameron Pickett, San Francisco; Moses Scholtz, Los Angeles; Howard Morron, San Francisco.

**E**LECTRO-DESICCATION and electro-coagulation are the terms introduced by William L. Clark of Philadelphia to express the thermic effects on living tissue produced by the action of the unipolar and the bipolar high frequency currents.

This therapeutic agent was first used in surgery in this country about fifteen years ago by Clark, who claimed for it many advantages over other destructive methods. Since that time little that is really new has appeared, yet the interest in it has been unusually great. The method has not been universally adopted by dermatologists, but each year many more are becoming interested in it, and those who have mastered the technique are enthusiastic over their results, and are so recording them in the literature.

While my experience has been more or less limited, the results obtained are encouraging.

The purpose of this paper is to record these experiences with the hope of stimulating the interest of other physicians to use this therapeutic agent.

The heat effects vary in degree according to the

\* Ernest K. Stratton (490 Post Street, San Francisco). M. D. George Washington University, 1916. P. D. Philadelphia College of Pharmacy, 1910. Practice limited to Dermatology and Syphilology. Hospital connections: San Francisco Polyclinic and Mary's Help Hospital. Appointments: Clinical Instructor Dermatology and Syphilology, Stanford University Medical School; Clinical Assistant in the Department of Dermatology and Syphilology, College of Physicians and Surgeons, Columbia University, 1923-1924. Captain Medical Corps (Regular Army), 1917-1922.



amperage and voltage of current employed, if we wish to cause desiccation, that is, a dehydration with consequent shrinking of the cells, we use the unipolar, which is known as the Oudin current; when we desire coagulation effects, that is, an actual coagulation of the tissue proteins into a homogenous mass we use the bipolar, which is known as the D'Arsonval current. However, heavy unipolar currents may also cause some coagulation, while mild bipolar currents may cause only desiccation.

There are many machines on the market that will deliver either type of current, the converting principle being the same in all of them. Figure 1 shows the electrical principles of the apparatus. A 110 volt, 60 cycle, unlimited alternating current passes through the primary coil of a transformer, thus inducing a current of much higher voltage in the secondary coil. The condenser and spark gap serve to break up the 60 cycle frequency into thousands, with a corresponding reduction in wave length. The current coming from such a combination is passed through the primary portion of an Oudin resonator, which may be in the form of an autotransformer which will again increase the voltage; the increase being proportional to the ratio of turns between the primary and secondary portions.

In the unipolar work, on account of there being no return circuit, the ratio must be higher so as to induce a voltage high enough to drive the current into the tissue. In the bipolar work, however, the return circuit is established by means of the indifferent electrode, hence a high voltage is not needed, and the ratio between the turns is much lower and the amperage correspondingly increased.

The greater the frequency the shorter the wave length. This point was made use of by D'Arsonval, who discovered first, that muscular contractions were intolerable with wave lengths of from 1500 to 2000 meters, while with wave lengths of less than 100 meters, as obtained with the oscillating current from an Oudin resonator, no muscular contractions were noted, but heat was produced within the tissues.

This current which now has a frequency of about 1,000,000 oscillations, with the voltage raised to about 15,000 and amperage limited to 2500 milliamperes is transmitted to the tissue to be destroyed by means of a metal point. Usually an ordinary sewing-needle is fastened in an applicator having a rubber handle, and in contradistinction to the actual cautery, which is hot and causes carbonization of the tissues with only superficial penetration, this metal point remains cold, the heat being generated within the tissue to any depth desired. The cell destruction is proportional to the strength and kind of current used. The explanation of heat development within the tissues rests on the fact that the body is a poor conductor of electricity and therefore offers resistance to it; this resistance shows up in the form of heat.

The effects of desiccation and coagulation on the tissues are different, and will be considered separately.

*Desiccation* will thoroughly destroy local skin lesions with a minimum amount of resulting scar

formation; the heat produced is moderate in degree, but of sufficient intensity to cause complete evaporation of the water content of the cells. Figure 3 confirms the histological findings of Clark and Asnis in regard to the effects of electro-desiccation, the cells and nuclei appearing shrunken and elongated.

The comparatively slight trauma to the tissues, the more or less selective action it has on abnormal cells, or rather on cells of lower vitality than nor-

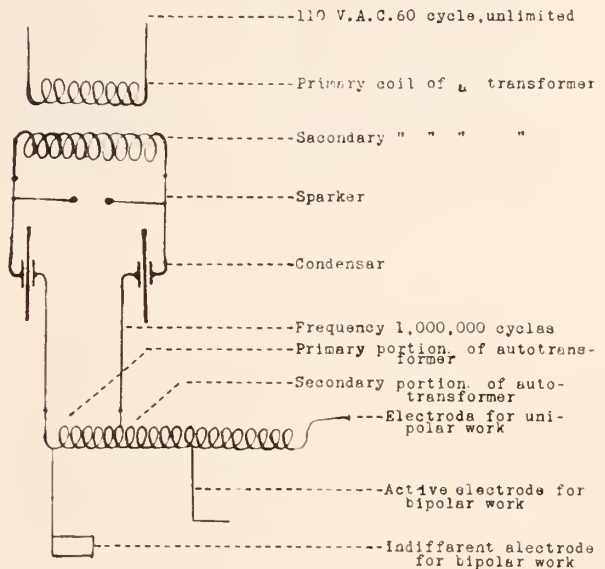


Fig. 1. Electrical principles of the desiccation and coagulation apparatus.

mal cells, and the mild secondary inflammation explain, from a histological point of view, the little scarring that follows this method of destruction. Its effects can be so perfectly controlled that it is possible to successfully remove a patch of chloasma without injuring the underlying tissues, or remove a basal cell epithelioma from the eyelid, for instance, without danger of producing an ectropion, or a large pigmented and verrucous nevus may be removed with good cosmetic results.

Very excellent results are also obtained in benign lesions of the tongue and mucous membrane of the buccal cavity; such lesions as papillomata, lupus erythematosus, glossitis rhombica mediana, can be destroyed rapidly and thoroughly. In two patients with the latter disease, whom I assisted in treating by this means, there was very little discomfort, and the end results were satisfactory.

In leucoplakia, it is the treatment par excellence. The patches are anesthetized by a topical application of a 10 per cent solution of cocain; then the application of a very fine current will completely destroy the lesion. The devitalized tissue can be separated and stripped off as a membrane with the aid of a pair of forceps. The after effects are not severe, and the patient never experiences the discomfort that usually follows radium applications in the buccal cavity.

A lesion of any size or depth can be removed with one application, but in the benign lesions that cover a large area it is better to destroy a portion at a time. The amperage, voltage, frequency, and time

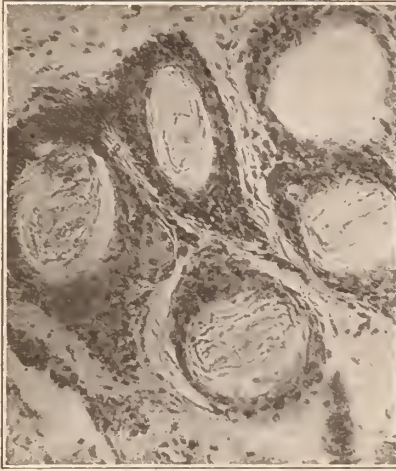


Fig. 2. Normal skin of guinea-pig, showing group of hair follicles.

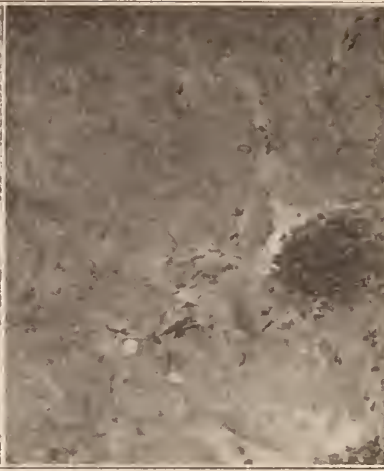


Fig. 4. Skin of guinea-pig, showing effects of coagulation; the cell outline is destroyed and the tissue has a hyalinized appearance.



Fig. 3. Skin of guinea-pig, showing effects of desiccation; the cells and nuclei of the epithelium lining the hair follicles are shriveled and elongated.

of exposure must vary according to the depth and density of the tissue treated. This can be gauged only by experience.

When superficial dehydration is desired the metal point is not brought in close contact with the tissue, but an air space varying from 2 mm. to 2 cm. is interposed between them. The current is projected to the tissue in the form of sparks which follow one another with such rapidity that it appears as a luminous glow. A small growth may thus be desiccated through a sheet of white paper without charring or discoloring it.

A dry crust forms at once after the application, and the time required for separation depends on the character of the tissue. Desiccated mucous membrane tissue soon becomes macerated by the secretions and may separate in a few hours, but on the skin surface it takes a longer time. When the skin is soft and vascular there is a more rapid separation than where it is hard and with poor blood supply; thus a soft mole will slough more readily than a callus. Regeneration of the skin or scar tissue often takes place underneath the crust, and in benign lesions where a good cosmetic result is of paramount importance I have found that it is a better procedure to desiccate superficially and not remove the crust mechanically, but allow it to slough away naturally, repeating the treatment at a later date if all of the lesion has not been removed. However, in treating small rodent ulcers, nodules of lupus vulgaris, or a patch of lupus erythematosus where it is more important to completely remove the entire lesion at one time, a curette is used in conjunction with the desiccation, mechanically removing the tissue after it has been destroyed. The base of the lesion is then sealed by superficial desiccation.

Other skin conditions in which this method is applicable, the degree of success depending on the experience and skill of the operator, are plantar warts, xanthoma palpebrarum, keloids, rhinophyma, and tattoo marks.

*Overtreatment is the mistake most of us make at the beginning and must be continually guarded*

*against, as destruction goes beyond its apparent limits.*

*Coagulation*, on the other hand, causes a more penetrating and more intense heat than that of desiccation, so that, in addition to dehydrating the tissue, it causes coagulation of the cell protoplasm as well; histologically, as Figure 4 shows, there is a complete loss of cell outline, thrombosis of the blood-vessels, and a hyalinized appearance of the tissue.

An indifferent electrode is necessary in this method, and a moistened asbestos pad must be placed in close contact with the patient's skin, the active electrode being of the same type as that used in desiccation, but both the active and indifferent electrodes are connected to either side of the winding. Since the effect of the high frequency current is entirely thermic, it does not matter to which side the active electrode is connected. A milliamperemeter is attached in the circuit and the strength of current used varies from 200 to 2000 milliamperes, depending on the size of the growth to be treated.

This form of therapy is especially indicated in the localized basal and squamous cell epitheliomas of the skin. Its advantages are, that large areas of abnormal tissue can be destroyed rapidly and effectively and with a minimum amount of harm to the surrounding tissue. And in case of recurrence there is no contra-indication to repeating the treatment in a more radical manner. Whereas, in recurrences following massive doses of roentgen ray or radium the basophilic degeneration of the surrounding tissue has resulted in atrophy and further radiations are contra-indicated. The blood and lymph channels are sealed, making the operation bloodless and thereby lessening the likelihood of metastasis.

Coagulation is perhaps the best means we have for removing the highly malignant melanocarcinomas of the skin. I had an opportunity of assisting in thus destroying these cancers in three patients in whom this method of treatment was used alone. None of the patients presented palpable glands, and in two no recurrence nor any detectable metastasis occurred during my observation of one and one-half



years. The other patient, however, while presenting no recurrence at the site of the original lesion, did present constantly recurring pinhead-sized melanotic areas near the site of the original lesion, which were destroyed by desiccation as rapidly as they appeared.

The technique used in the removal of these tumors is applicable to all types of malignant skin lesions, and is as follows: The area is made anesthetic with a 1 or 2 per cent solution of novocain by injecting the skin surrounding the tumor at a distance of at least two inches from its outer margin, care being taken not to enter the needle near the tumor mass. The tissue corresponding to the injected area, as well as the tissue beneath the tumor, is then coagulated so as to cut off the lymph and blood drainage from the part. If desired, tissue can now be removed for microscopical study with safety. The entire tumor is then thoroughly coagulated and removed as a mass of dead debris.

Where small epitheliomas of the mucous membranes such as the tongue and lip are treated before metastasis has occurred, the results are as good as those obtained in localized skin cancers. However, we cannot be sure that the adjacent glands are not involved, even though they may not be palpable, and for that reason the gland areas should receive prophylactic exposures with radium or x-ray.

In patients with far advanced epithelioma of the tongue, lip or skin, where vital structures are involved, and gland metastasis has occurred, surgeons are reporting excellent palliative results from using the coagulation method to destroy the local lesion, making a preliminary ligation of the blood supply of the part, and treating the glands with imbedded radium needles.

I wish to thank Dr. Frank Blaisdell of the Department of Surgical Pathology, Stanford University, for photographing the microscopical sections.

#### DISCUSSION

HARRY E. ALDERSON, M. D. (490 Post Street, San Francisco)—The section owes its gratitude to Stratton for so ably presenting this subject. Electro-desiccation and electro-coagulation have been made much easier of application by improvements in apparatus, but the cost of their art is still rather high. However, the method has proved its great value, excelling in some of its results the use of radium or x-ray.

Some months ago Stratton very successfully treated a patient for me by electro-coagulation. It was a case of basal cell epithelioma recurring at the border of a scar on the face, due to previous unsuccessful radium treatments. Recently the patient reported for observation, showing a perfectly inconspicuous scar and not the slightest suggestion of a recurrence.

My first experience with diathermy was in Berlin (1912), when I saw a patch of lupus vulgaris on the nose effectively and painlessly destroyed. It is surprising that the method is not more generally employed, for time has demonstrated the permanency of its good results in destroying malignancy, pigmented naevi, leukoplakia, and numerous more or less disfiguring benign lesions of skin and mucous membrane. When skillfully applied the cosmetic results are most satisfactory, and this is of prime importance to the dermatologist.

ERNEST DWIGHT CHIPMAN, M. D. (350 Post Street, San Francisco)—It is certainly gratifying that the discussion of a relatively new method of treatment has been handled so conservatively. There is no question that there exist great opportunities for the application of electro-coagula-

tion and electro-desiccation. As time passes, doubtless the indications will become more clearly defined in the minds of dermatologists. Even today there is ample room for differences of opinion as to the relative merits of such agents as carbon dioxide snow, the galvano cautery, and the electric needle. Various considerations such as location, the size and the type of the growth, influence us in our choice of the agent to be employed. More time must elapse before the exact status of the newer method can be estimated. In the meantime Stratton has given us a valuable summary which is free from any exaggerated claims and which will not give the profession at large the idea of a wonderful cure-all.

J. CAMERON PICKETT, M. D. (291 Geary Street, San Francisco)—Doctor Stratton's paper on electro-desiccation was of great interest to me, for the reason that I have heard of very little discussion on this method of operation since it was first brought out by Clark about fifteen years ago. At that time I copied an apparatus used by him, and I have used it in my office ever since; this has been very unsatisfactory, as the high current cracks the leaded glass plates very frequently. I was glad to note that Doctor Stratton has found a more suitable apparatus for generating the cold spark.

I have used the electro-desiccation almost exclusively in the removing of warts, keratosis, and beginning squamous cell epithelioma. The desiccating current has a special selectivity to pathological tissue and makes a line of separation from the normal tissue, leaving the pathological tissue desiccated and easily removed. Then, if necessary, radium and x-ray can be used in more advanced forms of epithelioma. This current coagulates the blood and destroys the small capillaries so that the operation is almost bloodless. In a few seconds it will destroy a small capillary nevus on the face, and if properly used will leave no scar.

MOSES SCHOLTZ, M. D. (Brockman Building, Los Angeles)—Stratton has brought to our attention a subject of great clinical importance. Dermatology in general has benefited from electrotherapeutics possibly more than from any other branch of clinical medicine; and diathermy bids fair to prove one of the most promising and efficient electrotherapeutic agencies in dermatologic armamentarium.

I have no personal experience with electro-coagulation, but I do use extensively desiccation with the Oudin current, so-called fulguration. This seemingly technically simple and elementary procedure, in my experience, has proven most useful and covers a surprisingly large field of clinical application. Its clinical advantages are many: First, the very simplicity of technic, so easy that it requires no preliminary experience or training. Second, the rapidity of administration and its instantaneous action to any desired degree. Third, the perfect safety from any injurious effects and complications, if applied with the most ordinary intelligence and care. Fourth, relative painlessness, allowing its use even on sensitive individuals without a local anesthetic. Fifth, its inherent aseptic quality because of the production of a dry scab of heat-coagulated tissue, which prevents the possibility of pyogenic infection and requires no surgical after-care. And last but not least the excellent cosmetic results, as its penetration can be easily controlled to any desired depth, and in the overwhelming majority of cases it leaves no scars whatsoever. Lesions that can be treated by desiccation are many. Here belong all kinds of small benign tumors and formations—warts and papillomata, particularly multiple warts in the bearded region in men, small vascular and pigmented nevi, sebaceous adenomata, seborrheic warts, senile keratoses, and even superficial incipient epitheliomata.

I believe that the use of diathermy will increase steadily, will grow in importance and clinical value, as dermatologists will familiarize themselves with its technic and clinical indications.

HOWARD MORROW, M. D. (384 Post Street, San Francisco)—Electrothermic destruction is a very useful addition to our therapeutic armamentarium in dermatology, particularly in the treatment of benign and malignant growths of the skin and mucous membrane. As is the case with any single method, electrothermic destruction

is not a cure-all, but may often be used to advantage in conjunction with radium, x-ray, surgery, or the curette. In addition to the conditions in which Stratton has indicated its usefulness, I would like to point out its value in the treatment of the radiodermatoses, especially in x-ray keratoses and epitheliomata. These often clear nicely under radium therapy, but the danger of accentuating rather than improving the condition is undoubtedly present, and we have discontinued radium treatment for them. Electro-desiccation or electro-coagulation removes these excrescences thoroughly, leaving a soft, vascular scar in place of the hard, avascular one which excessive radiotherapy causes. The area of destruction for an extensive lesion of this type must often be quite wide and deep, and the resulting ulcer may be painful and slow to heal, but the good result is our justification. It is notable that in extensive growths which are painful, especially those of the mouth, electrothermic destruction, though extensive, frequently relieves the pain at once.

## ANOMALIES, DISEASES, AND INJURIES OF THE SPINE

By JAMES P. KERBY \*

THE large number of variations and anomalies of development of the spinal column makes it difficult in many instances to differentiate the pathological from the anomalous; thus a knowledge of the anomalies and variations in development of the vertebrae is essential. Diagnostic difficulties are increased by certain other factors which, although being departures from normal, can scarcely be classed as pathological. Under this latter class may be mentioned variations associated with age, occupation, and posture.

In any study of the abnormal, we must have a full understanding of normal vertebrae. There may be some little difference in established standards, but with the exception of the fifth lumbar, and possibly the twelfth dorsal and first lumbar, a standard can be evolved, though it may have to be modified in the light of subsequent experience.

A typical vertebra develops from at least three chief primary centers: one for the centrum or body (some authors give two for the body, which fuse into one), the other two for the pedicles, posterolateral portion of the body, arches, and processes; and five secondary centers from which develop the tip of the spinous process, the transverse processes and a thin plate for the upper and lower surfaces of the bodies.

Variations in numbers include instances of 8 cervical, 12 dorsal and 4 lumbar; 6 cervical, 12 dorsal and 6 lumbar. Variation in the number of dorsal vertebrae is least frequently seen. To determine the

exact number of vertebrae it is necessary to radiograph the entire spine. Despite the variation in the distribution of vertebrae in the different regions, the total number of presacral vertebrae is nearly always twenty-four.

Variation in structure is shown in failure of the posterior arch to fuse—*spina bifida*. This is most likely to occur in the seventh cervical and first dorsal or fourth and fifth lumbar. Faulty structure in the fifth lumbar vertebra is seldom of clinical significance, and is probably an incomplete fusion rather than a failure to fuse. Rudimentary *spina bifida* is frequently accompanied by an anomalous cervical rib or sacralization of transverse process of the fifth lumbar vertebra. In some persons the laminae may fail to fuse; the spinous process forms from one lamina; and an anomaly, simulating an apparent fracture, is observed. Anomalous formation of the spinous process of the sixth and seventh cervical vertebrae, producing an appearance suggestive of a fracture of the tip of the process, has been reported, but so far as I have been able to determine no report of an anomalous formation above the sixth has been noted. Normally the spinous processes of the third, fourth, and fifth are short and bifid; that of the sixth is longer and usually single; that of the seventh is longer, heavier, and single. The spinous processes of the upper dorsal are very much like that of the seventh cervical but a trifle longer and heavier and point lower. Those of the lower dorsal are longer and narrower and point even more toward the sacrum. The spinous processes of the lumbar vertebrae are shorter and point more nearly horizontally. The spinous process of the fifth lumbar is much shorter than those of its fellows and is frequently only rudimentary. Occasionally the tip of the spinous process seems to be connected with the rest of the process by cartilage. Long transverse processes on the seventh cervical vertebra may simulate a cervical rib. The transverse processes of the third and fifth lumbar vertebrae are longer than the others. Those of the fourth are shorter and lighter. One of the commoner anomalies is the change known as sacralization of the fifth lumbar vertebra—an anatomical variation in which the transverse process of the fifth lumbar vertebra attempts to take on the character of the first piece of the sacrum. Instead of being a perfectly straight process, it is expanded and bulbous, extending down to and touching the top of the sacrum and sometimes the posterior portion of the ilium, occasionally forming a false joint; oftener unilateral. An analogous condition, though less likely to produce symptoms, is noted in the top of the sacrum, which sometimes assumes the contour of the last lumbar vertebra, and develops a piece at its upper border simulating a free transverse process.

Occasionally a congenital fusion of bodies is seen. There may be an arrest in development, causing the bodies to be only one-half the usual height. These last two conditions are seen almost invariably in the lumbar vertebrae. Occasionally a rudimentary supernumerary vertebra, nearly always wedge-shaped, is observed. Occasionally the first lumbar vertebra has transverse processes so long as to simu-

\* James P. Kerby (325 Boston Building, Salt Lake City). M. D. George Washington University, 1910. Graduate Study: Central Dispensary and Emergency Hospital, Washington, D. C., 1911-12; Children's Hospital, Washington, 1913; Chicago P. G. Medical School, 1916; School of Military Roentgenology, Johns Hopkins Hospital, 1917-18; New York P. G. Medical School, 1920. Previous Honors: U. S. Reclamation Service, Medical Dept., 1913-15; Medical Dept., U. S. Army, 1917-19. Present Hospital Connections: Roentgenologist to Holy Cross Hospital; St. Mark's Hospital; Salt Lake County Hospital; L. D. S. Children's Hospital; U. S. V. B. Regional Office. Present Scientific Organizations: Salt Lake County Medical Society; Utah State Medical Association; A. M. A.; American Roentgen Ray Society. Present Appointments: Major, M. O. R. C. Practice limited to X-Ray Diagnosis and Treatment since 1918. Publications: "Deep X-Ray Therapy," *California and Western Medicine*, May, 1924; "The Roentgenologist as a Staff Consultant," *Hospital Progress*, January, 1926.



late ribs. To differentiate it is necessary to picture the entire spine. Rarely, the tip of the transverse process may fail to fuse, with a resultant pseudoarthrosis simulating a fracture. A slightly anomalous development of a transverse process, associated with a well-defined psoas muscle, often suggests possibility of a fracture. A unilateral supernumerary rib may cause marked deformity of outline of the vertebrae.

Incident to middle and old age there are certain changes occurring in the vertebral column, which are as much to be expected as alterations in the blood pressure. These changes while probably, to a large degree at least, physiological, and, so to speak, environmental, complicate the problem of exact diagnosis. Examination of the spines of one hundred individuals who lead sedentary lives as compared with those of one hundred who lead lives of activity and muscular exertion, I believe, will show essentially the same type of changes in individuals of the same class, but there will be a definite difference between the findings in the two classes. For instance, there is less evidence of roughening and haziness of the interarticular spaces in the "leisure" class, while those who earn their bread by manual labor, in a large percentage of individuals between the ages of 40 and 60, will show some haziness of the interspaces, slight to moderate elevation of the periosteum at the margin of the articulating surfaces, with possibly a tendency to bridging of the intervertebral spaces. At 35 there is practically no lipping. Between 35 and 40 it is first noted and is most marked in individuals of the heavy, stocky type, infrequently in those of the slender build. After 45, practically all individuals of the stocky type show signs in varying degree of hypertrophic changes. At 50 a very large percentage of individuals of medium build show these changes. At 55 only a small percentage of even the slender type escape the changes noted. What the significance of these changes is, remains to be determined. Chemical, infectious and traumatic disturbances have been offered in explanation. Whatever the full significance, the fact is well established that an arthritis occurring in individuals with this, if I may use the term, "diathesis," is particularly resistant to usual treatment. It is thus clear that a distinction between what might be termed physiological changes and pathological changes may be difficult. A large percentage of individuals in whom changes of this sort may be noted give no history of pain or discomfort until trauma is received.

Arthritis of the spine is too large a subject to fully discuss here; too often we look for evidence of an arthritis between the bodies, forgetting that we really have two series of vertebral articulations: those between the bodies and those between the articular facets. It is the latter that we so frequently miss until the process has been of long duration (incidentally, they are the most difficult to demonstrate with the x-ray).

A common cause of arthritis is tuberculosis. In the early stages it is confined to the articular surface and the intervertebral spaces. Later the discs are destroyed and there occurs bone destruction,

compression and approximation of the bodies (nearly always the anterior portion), producing the characteristic kyphosis. There is no bone production. It is most frequent in young children and adults.

Infectious arthritis, which shows no characteristic x-ray findings, may follow almost any bacterial invasion, e. g., gonococci, spirocheta, pneumococci, and typhoid bacilli. It may occur at any age. I have recently seen a patient with infectious arthritis who showed marked relief after removal of tonsils harboring the organism of Vincent's angina. Infection usually produces a bony overgrowth manifested by a varying degree of elevation of the articular margin, often referred to as "lipping," without angulation or deformity.

A generalized atrophic change of unknown significance, involving the bodies and articulating surfaces, may be encountered.

The Marie-Strumpel type of arthritis is a spondylitis deformans of a progressive type, commencing in the lumbar region, slowly extending upward to the atlas, often involving the shoulders and hips. There is a progressive calcification, and ankylosis of the ligaments and cartilages is occasionally seen.

The role of trauma is a moot question. Some maintain there is not a pure traumatic arthritis, that the trauma merely serves to produce a locus minoris resistencie for bacterial invasion. It is my opinion that there is a definite relation of cause and effect between trauma and subsequent arthritis in many patients, and this inflammation will frequently be found between the articular facets rather than between the bodies of the vertebrae. This condition may be difficult or impossible of diagnosis. Comparison of findings immediately after injury and at a subsequent date is often illuminating. Usually the traumatic and infectious cannot be differentiated unless there is evidence of periosteal trauma.

Charcot joint and syringomyelia produce very similar painless destructive changes in the vertebrae. Syringomyelia usually involves the cervical and upper dorsal; Charcot, the lower dorsal and lumbar spine. In these conditions there is a tremendous destruction of bone, angulation, obliteration of intervertebral discs and bony detritus.

Actinomycosis and blastomycosis have been described as producing changes in the joint surfaces. These are not characteristic and are similar to the changes produced by other forms of infectious arthritis.

Secondary carcinoma is the most common neoplasm involving the spine. Round and spindle cell sarcoma, osteosarcoma, giant cell sarcoma, and osteoma follow in the order named. Tumors involve the bodies only; do not destroy interarticular artilage; produce no angulation; and deformity is very late, often not appearing until there is very little more than a shell of bone remaining. Enchondroma and cyst are very rare.

Fracture of the spine may involve the body or the neural arch, i. e., laminae, pedicles and articulating tubercles, or both. Fracture of the body may vary in degree; and may have added to it a partial or complete dislocation. The fracture may be a compression, narrowing from above downward; or

a comminution, with disorganization of the body fragments. I doubt if it is possible to have a dislocation without a fracture, at least of some part of the neural arch. Fractures are rare in children. They occur most commonly between 20 and 40, and much oftener in males. Most statistics place them most commonly between the sixth cervical and second lumbar. In my experience, they occur oftenest between the first and fourth lumbar vertebrae. Cervical fractures have the highest mortality. Fracture of the spinous process is seen oftenest in the cervical region. In simple compression fracture there is often very little neurological symptomatology. Complete recovery is usual. Usually the break in continuity is apparent, but in many patients a slight narrowing from above downward or a very slight "wedging" of outline is the only evidence. Occasionally this is not apparent until examination several weeks after injury.

In patients with comminution the neural arch is usually involved, followed by cord pressure. Convalescence is prolonged, and there is liability for some permanent motor paralysis. However, a fracture of the neural arch may occur, with marked comminution of the body of a vertebra, with no cord symptoms.

The character and permanence of cord symptoms depend upon the amount of pressure on and injury to the meninges and cord substance, and how soon relieved.

Although cord symptoms may entirely disappear, it is probable that x-ray evidence of injury to the bodies, except where very slight, will always be demonstrable.

Fractures of the transverse processes of the lumbar vertebrae are due oftener to indirect violence or muscular action than to direct violence. Many compression fractures of the lower dorsal and upper lumbar vertebrae are due to indirect violence.

Sacro-iliac dislocations are very rare, and I believe, without exception, follow severe direct trauma. There are, of course, lateral separations at the sacro-iliac articulation analogous to separation at the symphysis. The so-called sacro-iliac subluxation is probably due to disturbance of ligaments, and gives no x-ray evidence of its existence.

A condition known as Kümmel's disease is occasionally encountered. This is a condition in which a progressive change occurs in the bodies. Instead of being quadrilateral, they become wedge-shaped. Many of these cases follow trauma, and the condition has been called by some "railway spine," though this latter is usually more aptly applied to a litigation spine. The etiology is not certain, and definite connection with injury as the direct cause has not been made.

Spondylolisthesis is occasionally met; practically always due to a congenital defect, although some are said to be due to trauma. The influence of some factor arising in early childhood has also been suggested as playing a causative role. A stereoscopic examination of the region will usually show the forward displacement, but a lateral view demonstrates it definitely.

Incomplete radiological examination of the spine

is deplorable because it may give a false sense of security. I believe that in fractures certainly, and otherwise when the vertebral body is involved, an anteroposterior stereoscopic examination is necessary, as is also a lateral, and sometimes an oblique. In many patients repeated thorough examination is necessary.

It is realized that every condition seen in the spine has not been described and that many conditions have not been described in detail. I hope, however, that enough has been said to emphasize the difficulty of intelligent interpretation and in some patients the impossibility of diagnosis without correlating of radiological and clinical findings.

This paper is presented in the hope that it will stimulate more careful consideration of backaches and injuries, and the firm belief that many vague and obscure cases will be successfully diagnosed.

## THE PRESENT STATUS OF BISMUTH IN ANTI-SYPHILITIC TREATMENT

By SAMUEL AYRES, JR.\*

*Various salts of bismuth have been found by numerous investigators to possess marked spirocheticidal properties in animals experimentally inoculated with syphilis and in clinical human syphilis in all stages.*

*Symptomatic and serologic improvement compares favorably with the arsphenamines, is superior to mercury, and in many latent Wassermann-fast cases is better than that produced by any other form of anti-syphilitic treatment.*

*Bismuth salts, when injected intramuscularly in proper dosage, produce few toxic effects.*

*Bismuth should always be employed in patients who are intolerant to arsenic or mercury. A rapidly growing accumulation of data justifies its routine use in conjunction with the arsphenamines and mercury.*

*DISCUSSION by Harry E. Alderson, San Francisco; Irvin C. Sutton, Hollywood; George D. Culver, San Francisco.*

ALTHOUGH bismuth has been employed in the treatment of syphilis less than five years, an extensive literature has accumulated concerning it. All who have studied its action attest its value.

This paper attempts to present briefly the most recent developments in bismuth therapy from a practical point of view.

This may best be done under seven headings: (1) As a spirocheticide; (2) effect on the clinical course of the disease; (3) effect on the Wassermann reaction; (4) effect on body resistance; (5) toxic effects; (6) its relation to arsenic and mercury; (7) administration.

### (1) BISMUTH AS A SPIROCHETICIDE

Klauder has shown that in experimental rabbit syphilis an ample margin of safety exists between the therapeutically effective dose and the maximum tolerated dose when the drug is injected intramuscularly. The dark field became negative forty-eight

\* Samuel Ayres, Jr. (2007 Wilshire Boulevard, Los Angeles). M. D. Harvard University. Practice limited to Dermatology and Syphilology. Hospital connections: Good Samaritan, California-Lutheran, White Memorial, Children's, Los Angeles General and Hollywood Hospitals. Appointments: Clinical Professor of Dermatology, College of Medical Evangelists, Los Angeles; Member Board of Directors, Council on International Relations. Publications: "Glucose Tolerance Reactions in Eczema" (Arch. Derm. and Syph., May, 1925); "Chronic Actinic Cheilitis" (Journal A. M. A., October 6, 1923).



hours after the therapeutic dose and the chancre involuted within about eight days. Klauder employed sodium and potassium tartrobismuthate in aqueous solution and in oil, and bismuth troxide in oil.

Levaditi and Sazerac found that in rabbits infected with human syphilis, 400 mg. per kilogram of body weight of sodium and potassium tartrobismuthate injected intramuscularly was well tolerated. They found that one-fourth of this amount caused a disappearance of spirochetes from the chancre in twenty-four hours, followed by healing of the lesions on the second to the fourth day. In one animal observed for four months there was no relapse.

In nine cases of chancre observed by Pasini the dark field became negative within twenty-four to forty-eight hours after one injection of sodium and potassium tartrobismuthate.

## (2) EFFECT OF BISMUTH ON THE CLINICAL COURSE OF THE DISEASE

*Primary Phase*—According to Fournier and Guénot, chancres were as rapidly improved by bismuth as by any other form of treatment and disappeared in a few weeks. Hopkins reports a case of chancre of one week's duration showing positive dark field and strongly positive Wassermann, which was completely healed in four weeks as the result of six injections of sodium and potassium tartrobismuthate given in 0.200 and 0.100 doses. He reports another case of a lip chancre of five weeks' duration with a secondary rash, which was also healed within a month under similar treatment. Klauder records a lip chancre with positive dark field and positive Wassermann in which the dark field became negative twenty-four hours after one intramuscular injection of 0.1 gm. of sodium and potassium tartrobismuthate in aqueous solution. The chancre had entirely healed after nine injections given within three weeks. McCafferty found that in three cases of early primary syphilis spirochetes disappeared from the chancres in about six to nine days after the first injection of bismuth and that inguinal adenopathy disappeared from the thirteenth to the sixteenth day.

*Secondary Phase*—Hopkins cites three cases of secondary syphilis, a maculo-papular of two weeks' duration, a papulo-pustular (varioliform) of three weeks' duration, and a papular (corymbiform) of one week's duration, in all of which the rash had entirely disappeared within three to four weeks as the result of two to eight injections intramuscularly of sodium and potassium tartrobismuthate, each dose ranging from 0.100 to 0.200 given at intervals of from two to seven days. According to Fournier and Guénot, secondary skin and mucous membrane lesions healed as rapidly as with the arsenicals. Klauder reports a case of macular syphilis of one month's duration, in which the eruption had completely disappeared after three weeks of treatment with sodium and potassium tartrobismuthate given three times a week in 0.100 and 0.200 doses. Schwartz and Levin report that "in secondary syphilis bismuth therapy causes the disappearance of the local and general manifestations and

reduces the Wassermann reaction. It does these more quickly and efficiently than mercury, and there is less possibility of the development of a Herxheimer reaction or a neurorecidive than when arsenotherapy is employed. It has been used in the presence of jaundice, caused either by the disease or by arsenic, with success and without producing harm."

*Tertiary Phase*—Shivers concludes, from a study of fifty-seven patients, that bismuth is effective clinically in all forms of tertiary syphilis. He believes that it is superior to arsenic in some cases of neurosyphilis.

Fournier and Guénot found that the cutaneous and periosteal lesions of late syphilis healed promptly and satisfactorily under bismuth treatment. Grund reported marked symptomatic improvement in one case of cardio-vascular syphilis, with slight dyspnea and pre-cordial pain. Marie and Fourcarde have found prompt and definite improvement in central nervous syphilis involving vascular and nerve-root lesions and gumma, but no serologic or symptomatic improvement in advanced general paresis.

Ahlswede and Busch, after using the oxybenzoic acid compound of bismuth, conclude that "bismuth compounds promise most in the treatment of cerebral syphilis and tabes." Similarly, Mueller found quantities of bismuth in the spinal fluid, a decrease of the pleocytosis and clinical improvement in patients with syphilis of the central nervous system.

## (3) EFFECT ON THE WASSERMANN REACTION

The consensus of opinion of most investigators is to the effect that bismuth renders positive Wassermann reactions promptly negative in primary and secondary syphilis, and exerts a vigorous effect even in late syphilis. Grund, for example, showed that 33 per cent of a series of seventy-five cases of Wassermann-fast syphilis, all of whom had been treated with arsphenamine and mercury from one to seven years, became negative after fifteen injections of sodium and potassium tartrobismuthate in 0.200 doses; 60 per cent, however, were unaffected. Shivers reports a series of sixty cases in all but three of which the disease was chronic, in which 26.6 per cent gave negative Wassermann reactions after a total of 4.00 of potassium bismuth tartrate. All but one showed a reduction of the Kolmer quantitative complement-fixation test after a total of 2.00. Levaditi reports a prompt favorable action in primary and secondary syphilis in a large series of cases. Hopkins, in summarizing the effect of bismuth on the Wassermann reaction in a series of forty-three latent cases, found no improvement in 12; slight improvement in 7; marked improvement in 9; marked improvement with relapse in 10; change to negative in 5 (of which 4 were weakly positive before treatment). The number of injections varied from four to twenty-eight.

## (4) EFFECT ON BODY RESISTANCE

Klauder believes that "another possible advantage of bismuth in the treatment of syphilis which is of considerable importance, although based on theoretical considerations, concerns the occurrence

of neurorecidive following the use of arsphenamine." He cites the observation that irregular or lapsing treatment with arsphenamine seems to increase the incidence of neurosyphilis, due probably to the powerful spirocheticidal action of arsphenamine in destroying most of the organisms in the general circulation, leaving unharmed small foci in the central nervous system where the arsphenamine does not so easily penetrate. This leaves the body without a properly developed immunologic resistance, and consequently the foci of spirochetes in the central nervous system may proliferate unopposed. He feels that bismuth, because of less energetic spirocheticidal action than arsphenamine, and possibly by virtue of intramuscular administration, does not in all probability inhibit immunologic reactions of the host to such an extent as it is believed that arsphenamine does. One would therefore expect, he says, a lessened incidence of early neurosyphilis following irregular and lapsing treatment with bismuth.

Many of Hopkins' patients gained weight and improved in general nutrition under bismuth treatment.

#### (5) TOXIC EFFECTS

Of fifty patients treated by Hopkins only two developed a stomatitis, which subsided promptly on interruption of the injections; one patient showed a swelling of the buttock, from which a clear mucoid fluid was obtained, similar to a reaction reported by Fournier and Guénot. All authors warn against stomatitis, which, however, is not likely to appear unless the mouth hygiene is neglected or the treatment too vigorous. A grayish-brown or bluish-black deposit along the edges of the gums is a danger signal and calls for a reduction or temporary suspension of treatment. A severe stomatitis may be combated by intravenous administration of sodium thiosulphate, as in arsenic or mercury poisoning. In 1507 intramuscular injections of bismuth salicylate to 103 patients, the dose ranging from 2 to 3 grains every three to four days for ten to twelve injections, Ballenger and Elder report that occasional instances of polyuria or mild albuminuria were noted, but in no patients were the kidneys sufficiently affected to necessitate discontinuance of treatment. Severe nephritis has been reported, however, by several observers. If preliminary renal function tests were made, and if the urine were examined frequently during treatment, serious damage could no doubt be avoided. Ballenger and Elder also mention several instances of exanthematous reactions and an occasional tendency for some patients to lose appetite and weight. Very few references to cutaneous reactions, however, are recorded in the literature. Pain at the site of injection was a frequent occurrence when bismuth was first introduced, but recent improvements in the manufacture of various bismuth preparations have practically eliminated this drawback. Milian and Ducrey have reported symptoms of enteritis in a few cases.

#### (6) THE RELATION OF BISMUTH TO ARSENIC AND MERCURY

Most investigators assign to bismuth an interme-

diate position between arsenic and mercury in spirocheticidal properties. Majority opinion is conservative in advocating the use of bismuth as an addition to the older well-proven drugs in current use, rather than as a substitute. It is possible, however, that as data accumulate it may replace other remedies. In many instances where bismuth has been used alone clinical and serological results have been equal to those of arsenic and superior to those of mercury in practically all stages of the disease and in many instances, especially in Wassermann-fast cases, bismuth has been superior to either of the other drugs. Only the future can determine the final position of bismuth preparations among anti-syphilitic remedies.

Levaditi, one of the pioneers in bismuth therapy, is optimistic concerning its future. He says: "Although bismuth has been only recently employed, I have every reason to believe that when used early and in sufficient quantity it will cure syphilis. The absence of recurrences of the disease and the effect on the Wassermann reaction only serve to confirm the opinion. Equal from a therapeutic point of view to arsenical preparations, better than mercurial preparations, bismuth (trepol and neotrepol) is a valuable anti-syphilitic remedy, particularly in those manifestations of the disease which resist the action of arsenic and mercury.

#### (7) ADMINISTRATION OF BISMUTH

In most of the pioneer work on bismuth therapy potassium and sodium tartrobismuthate was employed, therefore this bismuth salt is mentioned most frequently in the literature. However, numerous other salts of bismuth have recently been subjected to clinical use, and the results seem uniformly good. Bismuth salicylate, the oxybenzoic acid compound of bismuth, quinine bismuth iodide, bismuth trioxide, bismuth citrate, potassium bismuthate, sodium bismuthate and metallic bismuth, suspended in sterile isotonic salt solution, are the preparations which have been most frequently used. It is rather difficult at present to appraise their relative merits, good results having been obtained with all of them, different investigators favoring various preparations. Levaditi, one of the first to introduce bismuth as an anti-syphilitic agent, favors metallic bismuth in suspension in a sterile isotonic solution, a preparation containing 95 per cent of metallic bismuth. It is well tolerated and has active therapeutic powers. It is administered intramuscularly in doses of 1.5 to 2 cc. every three or four days for ten to twelve injections. Intravenous administration of bismuth has been found to be too toxic, and consequently practically all preparations are given intramuscularly. Courses of bismuth may be alternated with courses of arsenicals, but an interval of several months should elapse between a course of bismuth and a course of mercury.

#### DISCUSSION

HARRY E. ALDERSON, M. D. (490 Post Street, San Francisco)—During the few years that we have used bismuth at the Stanford University skin and syphilis clinic we have given over three thousand injections of the same. We are satisfied that it is efficacious and feel that it stands between arsphenamine and mercury in usefulness.



We have had no untoward effects from its use, barring an occasional stomatitis. Sometimes the blue line appears on the gums, without there being much irritation. Of course, we look after hygienic care of the mouth and watch the patient's kidneys. We have found sodium thio-sulphate very efficient in clearing up bismuth stomatitis. In one case recently, the effect was very prompt, the condition subsiding almost over night. We give bismuth in early and in late lues. Some of our patients receive courses of arsphenamine and bismuth concurrently. They stand the combination well, but of course we are only trying this out with carefully selected cases.

In our experience the early, active lesions do not respond as promptly to bismuth injections as they do to arsphenamine. However, bismuth is very effective, more so, in my opinion, than mercury. We frequently see late syphilides disappear rapidly. One recent case presenting large nodular syphilides on the lip showed complete disappearance of the lesions within two weeks, during which time no medication but bismuth was administered.

Our persistent Wassermann cases having no discoverable active lesions have caused us much worry. Some of these we have seen become negative after a course or two of bismuth. We are wondering, however, how soon they will be positive again. It will take years, of course, to determine the real value of bismuth, just as it took some time to find out that one injection of salvarsan would not cure syphilis. So satisfactory has been our extensive experience with bismuth that we are beginning to feel that, along with arsphenamine, mercury and the iodides, it is at present one of our indispensable anti-syphilitic drugs. The Section is indebted to Ayres for presenting so well this important subject for discussion.

IRWIN C. SUTTON, M. D. (Taft Building, Hollywood, California).—Bismuth seems to resemble mercury, in that Herxheimer reactions are few and that neurorecidives are rare with its use in the treatment of syphilis.

It is of the greatest value when a patient becomes sensitive to the arsphenamines and yet must continue to be treated. Doctor Ayres has stressed the importance of kidney study. Severe stomatitis occurs ordinarily only when renal function is impaired and relatively large amounts of bismuth are excreted by the salivary glands.

Although the American practitioner has not yet embraced this new drug with the enthusiasm exhibited abroad, I would like to call attention to the fact that the American products of bismuth have been more highly standardized, less painful on injection, and as efficient as the gaudy foreign preparations.

GEORGE D. CULVER, M. D. (323 Geary Street, San Francisco).—Doctor Ayres has creditably reviewed the subject of bismuth therapy in syphilis. Any exaggerated claims for the superiority of the drug over the arsenicals and mercury would be as yet premature. Syphilis as a disease presents so many vagaries in its manifestations, in its reaction to individual resistance as well as to medication, and in the difficulties of positive proofs of a cure, that only a vast amount of carefully controlled and comparative therapy can permanently standardize any drug for use against this disease.

The disease lends itself so delightfully to the known methods of treatment that one doesn't wonder at the overenthusiasm possible with any addition to the excellent remedies at our command. A warning is always in order not to treat too vigorously, but to treat for a sufficient length of time. Often a more careful consideration of the individual patient will make it possible to secure a satisfactory end-result even when failure has preceded, and with the same anti-syphilitic drugs already used.

Bismuth has its place, but not in supplanting the proven anti-syphilitics. With the doctor who is treating only the occasional case of syphilis, it would still seem that the patient's greatest benefit can be secured through the arsenicals and mercury.

DOCTOR AYRES (closing).—A true appraisal of the value of bismuth in the treatment of syphilis will come only with time and experience.

Data already available, based upon the observations of many competent syphilologists in thousands of cases, should remove any fears in justifying its further use. Its use should be encouraged and the results reported.

## TREATMENT OF ENLARGEMENT OF THE PROSTATE AND THE RESULTS OBTAINED BY MODIFICATION OF YOUNG'S PERINEAL PROSTATECTOMY.

By FRANK HINMAN \*

(From the Department of Urology, University of California, San Francisco)

*There is probably no operation that gives more satisfactory results than a successful prostatectomy, and, of course, it would be unreasonable for physicians to expect 100 per cent of cures in patients who often have pronounced secondary complications, such as chronic infections of the urinary tract or back pressure changes in the bladder such as large diverticula, which, of course, in themselves produce urinary disturbances and continue to give symptoms after even the most successful surgical removal.*

DISCUSSION by Granville MacGowan, Los Angeles; Verne C. Hunt, Rochester, Minnesota.

WHEN a patient with a supposedly enlarged prostate consults a physician, the question at once arises as to whether this patient should have any treatment or very simple palliative medicines and, if treatment, whether this should be surgical or the use of a catheter. These are questions that the physician should answer for the patient and not leave the decision to one who knows little about the facts, and yet, as a matter of fact, many physicians are unfamiliar with the type of conditions which would indicate the advisability of instituting treatment of any kind and are uncertain in their own minds as to what kind of treatment even then should be instituted. The purpose of this communication is briefly to present the conditions, a knowledge of which will usually definitely decide what advice the patient should be given by his physician.

There are two sets of conditions which help in answering the first question as to whether the patient should have any treatment or be left alone. First, the symptomatology or complaint of the patient and, second, the conditions as found on examination. In the first set are the symptoms of frequency and urgency of urination, a complaint which often leads the patient himself to demand relief. Any man who has to empty his bladder as frequently as every half to one hour both day and night is quickly worn out and is anxious for any kind of relief. Where the frequency is a matter of every three to four hours and the patient only has to arise from one to three times at night, this symptom then is not an urgent one with respect to the institution of treatment. The next commonest complaint is one of difficulty, the patient taking longer to empty the bladder and often complaining of the stream being interrupted and usually in these cases of dribbling of urination at the end. This symptom may not be accompanied with marked frequency, and delay in seeking relief is more common with it on this account, but soon the dribbling may increase to a type of paradoxical incontinence demanding the use of a urinal, which is so disagree-

\* Frank Hinman (380 Post Street, San Francisco). M. D. Johns Hopkins Medical School. Practice limited to Urology. Hospital connections: University of California Hospital, San Francisco Hospital. Appointments: Clinical Professor of Urology, University of California Medical School; Urologist, University of California Hospital; Consulting Urologist, San Francisco Hospital.

able as to then lead the patient to seek relief. Usually the above two symptoms are progressive in nature, although they may show periods of exacerbation with temporary relief afterward. Men with moderately enlarged prostates may also have temporary attacks of bleeding and of complete retention, symptoms which in themselves may not demand prolonged or active treatment, but be purely temporary in character. It is, however, not possible to give the patient a decided opinion as to proper management from symptoms alone, but it is only by correlation of the severity of symptoms with the conditions revealed by examination that a just opinion can be based.

The findings of examination of particular importance in deciding whether it is safe to leave the patient alone or to decide for him between operation and catheter life are briefly as follows: Leaving out of consideration all questions of carcinomatous degeneration of the prostate, the type of enlargement and the resultant degree of obstruction is the first point to determine. Not infrequently, large glandular hyperplasias are associated with considerable infection and a course of systematic massage, with bladder irrigations, materially reduces the amount of residual urine with a consequent benefit symptomatically, and a delay in the necessity of direct intervention. The almost opposite type of small fibrous hyperplasias, often associated with small residuals but more marked symptomatic effects, particularly with respect to frequency and urgency, are also associated often with infection and similarly benefited by massage and irrigation. In the ordinary case little benefit results from massage, and more frequently the effect is the opposite in an increase of symptoms and difficulty from a resultant congestion after massage. The only type of case benefited by massage, and this benefit is purely temporary, are those with pronounced infection in association. As a rule, the type of enlargement, other than large glandular or small fibrous, is determined only after cystoscopic examination, and this is of help more with respect to surgical intervention than as a guide to a decision for or against surgery. In all of these cases in which cystoscopic study seems advisable, the patient should be so situated that he may be carefully watched and followed afterwards, because any instrumental examination in these cases is apt to be followed by an increase of symptoms or even complete retention, particularly if large residual is present. But, in spite of this, the most

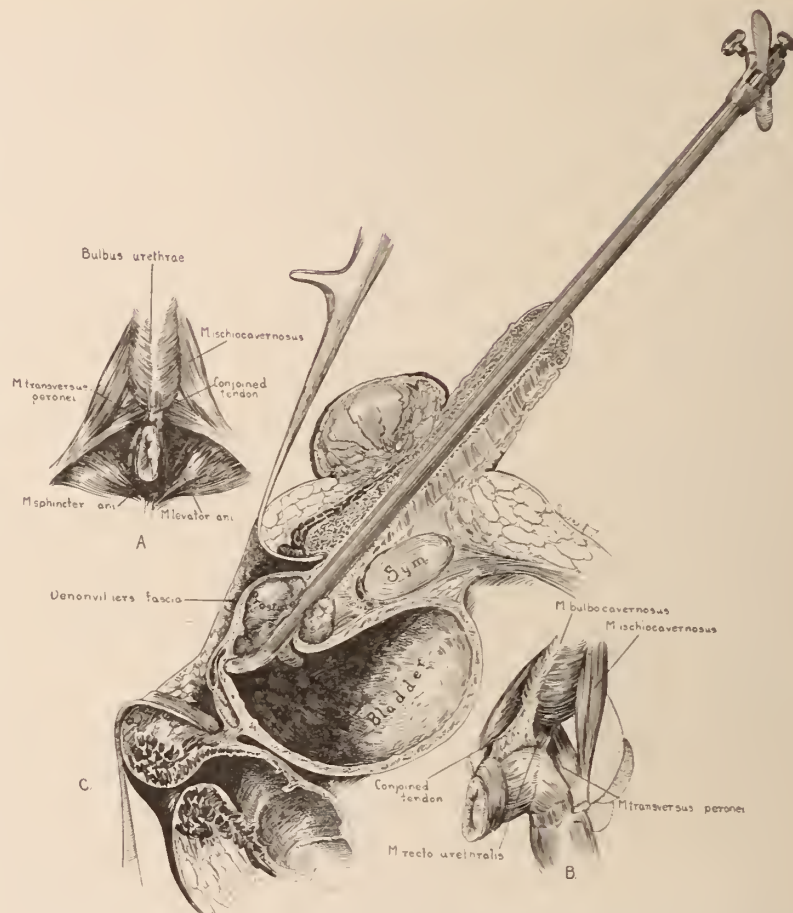


Fig. 1. Diagrammatic representation of tractor in the bladder, for the purpose of lifting the prostate into the perineal field so that its posterior surface may be exposed often without the necessity of dividing the recto-urethralis muscle completely. A shows the fossa to either side of the rectum between the levator ani and the transversus perinei muscles, and B shows the relationship of the bulb to the rectum, with the conjoined tendon and recto-urethralis muscle between. After division of the conjoined tendon, the posterior prostatic surface can often be well exposed without dividing the recto-urethralis.

help to a decision comes from knowledge of the degree of inability of the bladder to empty itself, and the amount of residual urine present in the bladder is the best guide as to the necessity of treatment. There are cases with pronounced symptoms who show small residuals, whereas those with large residuals may show few symptoms that are of particular inconvenience to the patient himself, such as marked nocturia, and, other things being fair, it is safe for a patient with a small residual to delay in treatment. Since residual is the objective evidence of back pressure, a knowledge of the effect of this back pressure upon kidney function is necessary in connection with it in order to give its full value as a guide to a decision in the interests of the patient. A patient with small residual and a normal renal function, as evidenced by a normal phenolsulphonephthalein output or normal amount of non-protein nitrogen or urea nitrogen in the blood, is then one in whom delay can be allowed so long as he is willing to put up with the symptomatic inconveniences of his condition. But the patient, irrespective of residual, whose kidney function is beginning to be impaired by reason of back pressure is one to whom delay is quite detrimental. It is seen that there is no definite figure in the amount of



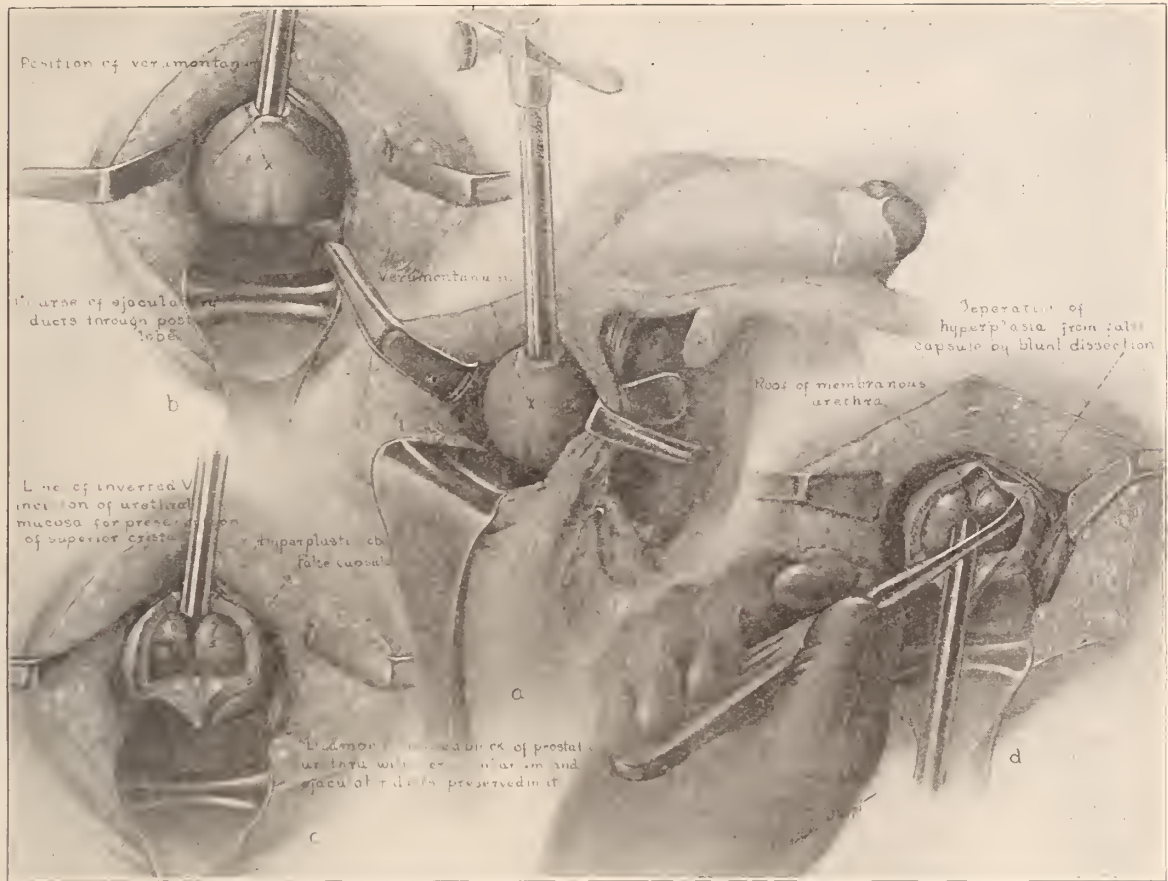


Fig. 2. Shows the method of enucleation so that the prostate can be radically removed en masse if desired.

residual which can be taken as an indication of a stage beyond which the patient should not be allowed to go without treatment, but it is consideration of the symptomatic disturbances in connection with the back pressure disturbances that gives the physician a definite basis for sound advice to his patient. There is, unfortunately, a general tendency by the general profession to procrastinate in these cases, and this would seem due to their unfamiliarity with the injury of such delay to the patient, as well as with the effects and results of treatment. This want of decision is, no doubt, largely due to the bad impression of older methods which modern results have as yet failed to remove, and even when the general profession, after an unwarranted delay, decide that the patient demands treatment, he is prone to advise a catheter life in preference to the risk of surgery when he would not hesitate to subject the patient to a gall-bladder or appendix operation, on the proper indication, either of which have a greater surgical risk. The discrepancy is due to the fact that the surgical mortality of prostatectomy used to be around 20 per cent and the profession has not yet awakened to the fact that, in spite of the age and general physical debility of these cases, prostatectomy has become one of the most benign of operations with a mortality well under 5 per cent.

The other reason for procrastination is the lack of confidence of the general profession in the results obtained by operation should the patient survive;

and, of course, the patient himself first asks both questions, namely, what is the risk and what is the assurance of being cured if I survive? There is probably no operation that gives more satisfactory results than a successful prostatectomy and, of course, it would be unreasonable for the physician to expect 100 per cent of cures in patients who often have pronounced secondary complications, such as chronic infections of the urinary tract or back pressure changes in the bladder such as large diverticula, which, of course, in themselves produce urinary disturbances and continue to give symptoms after even the most successful surgical removal. Great benefit results even in these cases by cutting off further progression of the back pressure changes.

From the beginning the writer has kept careful records and has attempted to accurately follow the results in all cases by follow-up questionnaires in order to know the exact results obtained. In the early period both the suprapubic and perineal routes were used, but it soon became evident that much better results followed the perineal, irrespective of the type of case, particularly in view of the fact that the perineal was by far the safer surgical risk. With experience in the perineal method, it early became manifest that, of its technical difficulties, perfect preservation of the external sphincter and complete radical removal of the enlargement were the two most important. Greater experience soon showed that certain modifications helped to make these two difficulties more fool-proof, and an analy-





The next step has already been described in detail and consists briefly of an inverted V incision of the posterior prostatic surface, with the apex just above the position of the verumontanum so that the resultant V flap can be drawn down, exposing the prostatic urethra with the glandular enlargements surrounding it, from which they may be enucleated en masse under the direct vision and with accurate preservation of the internal sphincter, as shown in Figure 2.

A third distinct addition to the perineal operation is the Davis modification of Hagner's bag for hemostasis, as shown in Figure 3, and which we now use in all cases, but with a urethral catheter.

#### DISCUSSION

GRANVILLE MACGOWAN M.D. (Brack Shops Building, Los Angeles)—Dr. Hinman has shown great wisdom in discussing the factors which determine the advisability of the immediate or delayed surgical interference where the symptoms of the prostate are annoying, and there is an inability of the bladder to completely empty itself, when he states in effect that the decision and advice must depend upon the blood chemistry of the patient and the dye output from the kidneys.

The patient with a small residual and a normal phenolphthalein output or a normal blood chemistry is the one in whom delay can be allowed, so long as he is willing to put up with the symptomatic inconvenience of the condition. But the patient, irrespective of the residual, whose kidney function is beginning to be impaired by reason of back pressure, is one to whom delay is quite detrimental.

The modification which he has devised, and after a sufficiently long experience introduces as a substitute for the operation of Young, has its advantages, in that by it the entire intracapsular adenoma mass may be removed, with the entire post-collicular urethra in one piece, as is so frequently accomplished by suprapubic manipulation, and with whatever advantages this may possess, on the other hand. It shares all the dangers that beset the unskilled or unwary operator who approaches the bladder-neck through the perineum in carrying out the Proust Young prostatectomy. Without prejudice, the truth of the matter is that the removal of hypertrophic prostates is much more frequently conducted by a surgeon of little experience and small skill than it is by an expert operating urologist like Hinman, and this condition always will remain, so the morbidity from the operation, and the excellence of the results obtained, may not be judged by the figures that he presents, either in the number of fatalities, or the perfection of the cure. The real urological surgeon should be able to do either a perineal or a suprapubic operation with equal skill and with entirely satisfactory results. But the poorly trained man who operates infrequently had better attack the prostatic cavity from above.

VERNE C. HUNT, M.D. (Mayo Clinic, Rochester, Minnesota)—Doctor Hinman's presentation of the modification of the classical perineal prostatectomy removes a former objection to that method of approaching the prostate gland, and obviates the danger of possible post-operative incontinence. He and the late Doctor Geraghty have contributed much to the practicability of the operation.

Unmistakable progress has been made in prostatic surgery, so well evidenced by the elimination of the time-worn argument of perineal versus suprapubic prostatectomy. Utilizing mortality rate and ultimate functional results as a basis for comparison between the suprapubic and perineal operations, when performed by those skilled in the respective methods, at the present time leaves little to be desired. Individualized pre-operative treatment in all cases has proved a most important factor in the successful management of prostatic obstruction, and a most important factor in the minimizing of surgical mortality, allowing a safe and successful operation by either method in skilled hands. An analysis, without prejudice, of the

reliable reports of series of cases operated upon by surgeons skilled in the respective methods of prostatectomy shows an equally minimum mortality rate and equally good functional results.

No longer may mortality and ultimate functional results, the criteria of merit of a surgical procedure, be used to discredit one or the other method of prostatectomy. The choice of method is dependent upon personal preference and the qualifications of the surgeon.

**Epidemiology of Poliomyelitis**—The most widely accepted theory concerning the mode of spread of poliomyelitis is that of direct contact through the upper respiratory passages. However, epidemiologic evidence of direct contact is scant. The proportion of cases ascribed to direct contact, made up largely of multiple cases in families, has been stated at around 5 per cent. It has been observed that the onsets of multiple cases in families as a rule so nearly coincide that they probably represent in the majority of instances simultaneous infection. When allowance is made for this, the proportion of direct contact cases is reduced to an extremely small figure. According to W. Lloyd Aycock, Boston (*Journal A. M. A.*), observation of the occurrence of poliomyelitis in Vermont over a number of years has borne out the idea that recognizable cases seldom occur in such relation to one another that they could be considered as resulting from direct contact; and yet, on the other hand, the time and space relationships between such cases suggest a more definite relationship than is implied in the abortive case healthy carrier theory of transmission. In a study of multiple cases in families it was found that, in the majority of instances in which more than one case occurred in the same family, the onsets were so close as to suggest simultaneous infection. More rarely, some patients were found attacked at a later date—after an interval of from ten to eighteen days—indicating that they were probably secondary infections. The idea of simultaneous infection is further borne out by the intervals between so-called contact cases. In New York City, in 1916, it was found that additional cases occurring in the same house but not in the same family likewise occurred in the majority of instances within such a short time of each other as to be considered coincident infection. In Massachusetts, in 1916, the majority of so-called contact cases (not in the same family) had practically simultaneous onsets. Aycock presents data in simultaneous onsets of poliomyelitis from common source infection; in common source groups with an interval of from ten to eighteen days between cases; in instances of poliomyelitis with an interval of from ten to eighteen days between cases; in isolated outbreaks of poliomyelitis, and time and space between cases in relation to transmission. Aycock feels that this study suggests that paralytic poliomyelitis is not infrequently transmitted from a given person to other persons with a definite range, but that transmission in such instances is not usually through direct contact between the individuals, nor through the intervention of missed cases of healthy carriers, but through some indirect means. This is illustrated by a recent outbreak, the epidemiologic evidence of which pointed to milk as the means of transmission.

Sixty centuries have elapsed since Egyptian medicine first made its imprint on humanity. The Greeks gave us a new conception of medicine as an art. True, the early leaders in medicine were not only physicians, but also priests and philosophers with little knowledge of anatomy, physiology or chemistry; but they implanted into the basic structures of our science the spirit of the healer.—Wendell C. Phillips, *Journal A. M. A.*

We are a nation of extremists. A little less food and a little more exercise would do most of us a lot of good. But when we take up exercising we generally go at it too strenuously, just as when we start dieting we go to the other extreme and begin to starve ourselves.—The Medical Standard.

What we call rational grounds for beliefs are often extremely irrational attempts to justify our instincts.

—Huxley.

## PREDISPOSING FACTORS TO PELVIC RELAXATION AND PROLAPSE (ETIOLOGY)

By JOHN VUWINK \*

*Constitutional inferiority or debility plays a tremendous role in the causation of prolapse. Birth may tear or stretch the pelvic supports and suspensory structures so that herniation of pelvic contents occurs. Ill-advised mechanical measures to hurry labor increase the probabilities of hernia, and judicious interference under definite conditions and for definite purposes decreases the dangers of hernia. Finally, apparently normal women with normal passenger passage and powers under competent guidance may still develop more or less relaxation and even hernia following labor.*

*Adequate prenatal care to increase resistance, competent management of labor to eliminate tissue damage, and careful postpartum care to restore normality of tissue, does further safeguard women from the discomfort and disability of prolapse.*

Discussion by Norman H. Williams, Los Angeles;  
Henry A. Stephenson, San Francisco.

THAT our knowledge of pelvic prolapse is still incomplete, is recognized by the absence of standard treatment. The fact that hernia is a definite factor in pelvic prolapse is coming to be generally recognized, and much confusion is eliminated by the knowledge that there are several varieties of hernia. They have a common cause, but the eventual pathology depends not only on the original location and extent of the lesion, but upon the age of the patient, duration of the lesion, subsequent activity with increased intra-abdominal pressure, tonicity of tissues, sepsis, repeated pregnancies, and labor.

The normal support of the pelvic organs depends upon the adequate function of each structure in the pelvis. The suspensory and supporting apparatus are interrelated, with a uniform function, and are even anatomically inseparable. The endopelvic fascia is the chief supporting agency, and in the healthy woman is probably more important than the suspensory supports. Lesions in the pelvic supports may be in one or several places, and hernia follows one or more of the four lines of cleavage described by Dickinson. Such pathological conditions are generally a cystocele, rectocele, and prolapse of the uterus; not uncommonly an enterocele or urethrocele. Only occasionally do the structures intimately associated with the posterior of the pubis or posterior to the rectum prolapse.

The occurrence of hernia may be congenital or acquired. Congenital pelvic hernia constitutes about 2 per cent of all prolapses. It obviously depends upon incomplete development and congenital weakness of the supporting and suspensory tissues. Physicians are more particularly concerned with the acquired form, which practically always is the sequelae of pregnancy, labor, or abortion. Therefore, its etiology is associated with the anatomy of the pelvis and the mechanism and management of labor or abortion.

The pelvic structures of one woman, in spite of

violence, may be adequate to prevent the formation of hernia, while in another even minimal trauma may be followed by various degrees of prolapse, including procidentia. The view is expressed by some that all forms and types of relaxation are due to inadequate or constitutional inferiority of tissue. It is reasonable to assume that constitution undoubtedly plays an important part in the developmental formation of muscle, ligaments and fascia, and we may reasonably assume that defective tissue is of primary importance as a predisposing factor in pelvic prolapse. Tissues, ill-constructed to withstand strain, with no power of elasticity, tear easily; tissues may stretch inordinately with resulting relaxation; or diastasis may occur, and hernia be an eventual consequence. Diet, outdoor life, and exercise play a dominant part in strengthening pelvic tissues and thus in preventing prolapse. There is an unwarranted accusation against the strong tissues and muscles of the athletic type of woman. But even so, there is little danger of revamping the ordinary or subnormal type into an athlete, regardless of strenuous efforts to do so in nine months, under the conditions imposed by pregnancy.

The maternal injuries of childbirth depend in part on the constitutional integrity of tissues, and in part on the mechanism and management of labor. *Every normal birth causes trauma of tissue.* Repeated births, particularly frequent births, increase this damage, and abnormal births are extremely liable to extend such injuries. The violence associated with precipitant or poorly managed labor is quite likely to increase the extent of injuries, and impair the function of the supporting and suspensory structures.

Prolapse of the upper segment of the pelvis usually follows damage to the supporting structures which center about the cervix. Relaxations of the lower plane center about injury to muscle and fascia forming the perineum.

Watkins says that injury occurs near the cervix both in bladder prolapse and in high rectocele, and that the tear is transverse because of a longitudinal force. Internal rotation occurs when the presenting part is in the cavity but still in intimate connection with the cervix, and such force is delivered transversely. The grinding, rotating action at this phase of the mechanism of labor is a potent cause of laceration and supplemental relaxation of the supporting tissue of the upper segment. Active measures to hurry labor before internal rotation is complete increases the liability to laceration in and around the cervix.

Some textbooks on obstetrics convey the impression that dilatation, flexion, internal rotation, and descent of the presenting part are synchronous movements, beginning with the onset of labor. Many interns have that conception. Progress of labor is confused with advance of the presenting part. More attention in the first stage should be focused on dilatation than on descent. Progress and advance are not synonymous. Everyone has observed, particularly in the multipara, that the head is frequently at the inlet and not engaged until the first stage is complete and that then flexion, internal

\* John Vuwink (1021 Pacific Mutual Building, 523 West Sixth Street, Los Angeles). M. D. Rush Medical College. Practice limited to Obstetrics. Hospital connections: Los Angeles General, Methodist, and Hollywood hospitals. Publications: "Low Cervical Caesarean Section," California and Western Medicine, November, 1925.



rotation, descent, and even delivery may be completed by one hard contraction. That this is not more widely known accounts for many precipitant labors.

Usually in multipara, not uncommonly in primipara, especially in occipit posterior positions with deflection of the head, advance does not always occur until dilatation is complete. If progress is confused with advance, as it frequently is, ill-advised attempts at delivery are instituted because the situation is considered abnormal, not because labor is arrested. The grind of internal rotation and the forceful longitudinal pressure, with the cervix almost dilated, is frequently augmented by binder, pituitary extract, excessive straining, and forceps because the head is high. The cervix is pushed downward by the presenting part, and frequently the anterior lip is caught between it and the symphysis and dragged still further downward. The inevitable results are tears in the fascia, and the pelvic organs are stripped from their attachments. Subsequent subinvolution, early activity, and increased intra-abdominal pressure may complete the unfortunate picture with first and second degrees of prolapse, atrophy of tissues later in life, and even advanced types of prolapse.

The delay of progress in labor is associated with various conditions: pelvic deformity; disproportion, maternal or fetal, or both; malpositions; breech; tumors; or anomalies of the power of labor. Delayed labor implies prolonged pressure and protracted overstretching. Prolonged pressure increases edema and friability of tissue, decreases the probabilities of physiological progress, and increases the damage of tissue because operative interference is high. Interference in the first or second stage of labor does not necessarily mean poor obstetrical management, for studied intervention, in the presence of definite pathological conditions, lessens the chances of injury to tissues with decreased resistance.

Prolonged labor is usually associated with two conditions: a full bladder and a full rectum, both of which are potent in increasing the likelihood of trauma. The bladder is firmly connected with the cervix and pubis, and the damage caused by straining against its incompressible contents causes a separation of these fascial connections and a subsequent sliding of the segment with bladder prolapse. The rectum is closely allied with the posterior vagina through the rectovaginal fascia, and by fascial bands to the coccyx and sacrum behind. Pressure against a rectum overdistended with hard fecal matter causes tearing in the rectovaginal fascia with potential rectocele, which is pulled back by its attachment posteriorly.

Complete dilatation and retraction are essential to normal delivery. Most damage to the upper pelvic floor occurs through operative attempts at delivery before complete dilatation. The unpardonable obstetrical error is the delivery by forceps through the undilated cervix, because it is impossible without serious tissue damage. Mechanical aids to delivery such as the abdominal binder, forceful straining with straps, or pituitary extract, are equally

deserving of condemnation. Straining by the patient is physiologically sound only when dilatation is complete, not when *almost* complete.

Injuries to the perineum usually result from management of labor in the second stage. An important etiological factor is the desire to deliver without laceration, allowing the head to press and bruise and overstretch the vagina for hours. Mechanical interference, with undue haste in effecting delivery, particularly when the forces applied to the forceps are not in the axis of the canal, materially increases the damage of all pelvic tissue. Such delivery in the presence of disproportion augments greatly the probabilities of tissue damage. Pressure from an unyielding perineum forces the presenting part against the structures of the upper segment and increases damage above as well as below.

The proper repair of all lacerations is a prophylactic measure to subsequent prolapse. Repair does not mean one, two, or three stitches inserted equidistant and tied so that the skin edges approximate. Adequate restoration of torn or cut tissues implies a careful restoration of individual severed tissue. Proper aseptic repair decreases the incidence of sepsis, and sepsis delays involution. The sepsis following abortion particularly after curettage, when the cervix is pulled far out, may cause a retrodisplacement, tissue injury, and delayed involution.

Delayed involution implies softness, laxity, and hyperextension of the suspensory apparatus and frequently a large uterus which falls backward. The traumatized supporting structures cannot withstand the extra strain, especially with increased intra-abdominal pressure, and gradually increasing prolapse results. Asepsis in labor is essential to proper involution, for complete involution decreases the burden of the supporting structure.

The puerperium is not without etiological significance. The interrelationship between suspensory and supporting apparatus which successively maintains the pelvic organs in position is essentially strong tissue. Some bruising, stretching and even tearing, is inevitable. Constitutional inferiority of tissue and excessive bruising of tissue demand sufficient rest and inactivity to allow of proper healing. This predisposing factor may be eliminated by the skillful management of the puerperium with emphasis on strengthening the muscles of the abdomen and floor of the pelvis.

Intra-abdominal pressure in the presence of weakened supporting tissues is a very definite factor in maintaining and in increasing relaxation. Increased pressure must be avoided during the lying-in period, particularly during early attempts at urination and defecation, and a too early resumption of normal activity.

Conditions other than congenital causes not associated with pregnancy may be presumed to cause prolapse. The weight increase of tumors, hypertrophy of the cervix, faulty dress, resulting effects of pelvic inflammation, severe and constant effort and general debility in elderly women may be auxiliary, but practically never determining factors. The opinion has been expressed by many that prolapse

does not occur after accidents unless there is a fundamental defect predisposing to hernia.

#### DISCUSSION

NORMAN H. WILLIAMS, M.D. (1052 West Sixth Street, Los Angeles)—In his analysis of the causes of pelvic relaxation and prolapse Doctor Vruwink has by direction and implication developed prophylactic as well as remedial measures which, if carefully practiced, would diminish many of the ill results common in obstetrics. The mortality in obstetrics can be fairly well estimated, whereas the stupendous amount of morbidity can only be surmised. That it is all too common, however, is the daily observation of physicians. To be sure, there are inherent and constitutional factors predisposing to these results. On the other hand, much can be done to reduce the acquired injuries attendant upon childbirth as suggested in this discourse. The science of obstetrics has progressed slowly, as compared with many other branches of medicine. In prenatal care and in the application of aseptic principles its development has been greatest. Probably the most important phase for future progress lies in the reduction of maternal morbidity. This will develop only as higher ideals are formed and maintained by those engaged in this practice; as more and more the commonplace evaluation placed upon it by both physician and the nonmedical public gives way to its rightful place among the other branches of medicine; when there are fewer who practice mainly to retain the family clientele and more devote their entire energy and intelligence to it as a specialty.

HENRY A. STEPHENSON, M.D. (516 Sutter Street, San Francisco)—The essayist has indeed covered the subject in a most thorough and efficient manner. His division into constitutional and acquired causes is very good.

Inasmuch as the acquired causes are to a very large extent preventable, it seems to me that we should give most of our attention to them. The following seem to me to be the ones most often concerned in this particular condition:

1. Confinements in rapid succession.
2. Haste in delivery, particularly operative cases.
3. Neglect of lacerations in the anterior portion of the vagina, even when they seem very superficial.
4. Allowing patients out of bed too soon after delivery.
5. Malpositions following confinement.

The obstetrician and physician doing obstetrics should try to avoid these five factors, and by so doing prevent, in the majority of cases, pelvic prolapse.

**Teaching of Gastro-Enterology in Our Medical Schools**—In order to determine what position, if any, gastro-enterology occupies in the curriculum of undergraduate medical schools, Sidney K. Simon, New Orleans (Journal A. M. A.), collected information by means of a questionnaire. An analysis of sixty-six replies received shows that sixteen schools have made provision for a special place for gastro-enterology in the curriculum. In thirty-five schools special hours are devoted to the subject. In six schools a chair or subchair of gastro-enterology has been established. Simon is of the opinion that gastro-enterology is now in a position to press its just claim for recognition on the curriculum of the undergraduate school. He agrees with the prevailing sentiment of the authorities on medical education that a certain concentration of authority in the major clinical branches, three or four at the most, is necessary in order to conform with the real intent of undergraduate study, namely, to turn out general practitioners of medicine. Each special subject, though treated as a distinct subdivision, should be brought under the centralized control of the departmental chief. Nonetheless, the fact remains that gastro-enterology is fairly entitled to recognition in the plan of undergraduate teaching, and it is equally undeniable that instruction in the subject is best given by those possessing special training and experience in this particular field of work.

Of the 7000 prisoners in federal penitentiaries, 35 per cent are violators of the narcotic law.

## COMPLICATIONS FOLLOWING PROSTATECTOMY

By J. C. NEGLEY \*

DISCUSSION by W. B. Parker, Los Angeles; Edward W. Beach, Sacramento; R. L. Rigdon, San Francisco.

THIS résumé, from the records of the Los Angeles General Hospital, covers the work of the entire staff from the oldest senior to the resident urologist and includes only cases of simple benign hypertrophy that had complete removal of the gland by the suprapubic route. No cases are included which developed complications after leaving the hospital, and most of them were under observation for a month or less. In all, 250 patients were operated upon. Bronchopneumonia occurred in 11 patients; myocarditis in 3; pyelonephritis in 3; peritonitis in 1; and hemorrhage in 2. Of the less serious complications, epididymitis, seven single and two double occurred in nine patients. Seven patients had residual urine, six of them had a half-ounce or less, and one had three ounces. Suprapubic fistula occurred three times in patients with residual urine. Contracture of the bladder neck troubled one patient; psychoses occurred in two patients, one of whom had a four plus Wassermann; and the other, from his history, had been somewhat subject to transient attacks of mental aberration for fifteen years.

**Bronchopneumonia**—In both the fatal and milder cases, bronchopneumonia began on or after the ninth postoperative day. As all patients had spinal anesthesia, the cause of the pneumonia cannot be laid to bronchial irritation from general anesthetic. Most of these patients had respiratory infection with coryza, sneezing, sore throat, and later a cough. It is a question whether such pneumonias originate with the patients from some already long-existing foci, or from sources outside the body. Since the vast majority of these patients have infective foci somewhere, it is my opinion that most of the bronchopneumonias originate in the patients and not from outside sources, so that prophylaxis against this complication must be directed against things existing within the patient. Infective foci should be removed, resistance built up and, above all, these debilitated old men should be kept in bed for a week or ten days and not subjected to exposure or exhaustion in the first few days after operation. All irritations, dressings and treatments also should be done in bed for the first week at least. Needless to say, no patient with even a slight cough, rales, recent bronchitis, or other respiratory infection should be operated upon until he has fully recovered. Care should be taken that the patient does not have abdominal distention to such an extent as to cause pressure upon the diaphragm, thereby causing shal-

\* James C. Negley (809 Haas Building, Los Angeles). M. D. University of Michigan. Bachelor of Philosophy, Westminster College, 1906. Practice limited to Urology. Hospital connections: Los Angeles General, Pacific and Clara Barton hospitals. Appointments: Consulting Urologist, Pacific Electric Railway. Publications: "Calculi in the Kidney and Ureter," California and Western Medicine, 1923; "Spinal Anesthesia in Urology, with Review of 5500 Cases," California and Western Medicine, 1924; "Complications Following Prostatectomy," California and Western Medicine, 1925; "Syphilis in Pregnancy," Urologic and Cutaneous Review, 1922.



low breathing. Repeated hypodermoclysis under the breasts also at times causes so much pain as to bring about shallow breathing. This is given as one of the causes of postoperative pneumonia, i. e., the incomplete inflation of the lungs over comparatively long periods of time. Isolation and special nursing many times will save these patients even after pneumonia has become established.

**Myocarditis**—Prophylaxis against this complication should include digitalization of the patient or other heart stimulants should be used. Spinal anesthesia always should be employed. No patient should be operated on with a blood pressure at or near 100 systolic. Postoperative dangers are minimized by sustaining the blood pressure during operation and afterward by appropriate measures. We should guard against the injection of large amounts of fluid quickly. Giving 1500 or 2000 cc. of solution intravenously in a short space of time may precipitate trouble. Nor should we in our zeal to have the patient drink fluids force him to take more than two or three ounces at a time. Copious draughts of a pint or more of water at a time may lead to acute dilatation of the heart or spells of vomiting, which do not help an already weakened myocardium. Fluids are best given by hypodermoclysis or proctoclysis, to insure that they are not absorbed too rapidly.

**Pyelonephritis** is a complication that cannot be foretold by the phthalein test or blood chemistry when the preoperative kidney function is near normal. Most cases of pyelonephritis occur in patients who have a low but stationary phthalein output and in whom the bladder urine is highly infected with many different types of organisms. I do not believe that a ureteral catheterization is necessary before prostatectomy, but I am beginning to believe that ureteral catheterization in those patients with highly infected bladder urine is indicated. If examination shows one or both kidneys heavily infected, prostatectomy should be deferred even if the phthalein and blood chemistry findings are within the limits of safety.

**Hemorrhage**—Only rarely does a patient die from hemorrhages at the time of operation or shortly afterward. However, hemorrhage may, by lowering the resistance, prepare the patient for some other complication. This hemorrhage may be best prevented by the so-called open operation where the operative field is under direct visual control, and all ragged edges and tags can be removed and the edges sutured with a continuous or interrupted catgut suture. A Pilcher or Hagner bag against the prostatic fossae is the most efficient and least disturbing agent we have for the control of hemorrhage. Packing the entire bladder cavity with gauze is also efficient, but leads to varied degrees of tenesmus and pain and not inconsiderable shock on removal. Many and varied agents, either locally or by hypodermic needle, have been tried but are uncertain, and if relied on alone certainly are dangerous.

**Peritonitis** fortunately occurs in but a small number of patients and generally is the result of an accidental tear of the peritoneum. This is an acci-

dent which happens not infrequently, but if recognized and repaired seldom leads to complications.

Infection, including that about the wound, perivesicular, or in the space of Retzius, producing phimosis and scrotal cellulitis, makes this complication one of the most serious we have to deal with. It is entirely unnecessary if close attention is given to basic surgical principles. Many contend that it is impossible to operate without infection where urine and other purulent material must come in contact with the wound. This is true, but only relatively so, for if one reduces the size of the space likely to become infected he thus reduces the amount of the infection. This is best accomplished by an anchor suture through muscle, fascia and outer bladder wall just at the top of the space of Retzius so as to close off this space. This obviates a drain in this space and does not make of it a pocket which, when filled with infected material, makes of it a perfect bacterial incubator. Too much exposure of the bladder wall laterally should not be attempted, and in fact before the De Pezzer catheter is put in place, the space surrounding the incision area in the bladder should be watertight. Exponents of wide exposure of the bladder will contend that proper drainage will take care of any infection. This may be true, but if we eliminate dead spaces, infection and extensive drainage are unnecessary.

**Epididymitis**—This complication in a well-performed prostatectomy is annoying, and while it does not lead to fatalities it retards recovery and causes pain and lowered resistance to an otherwise uneventful case. The only sure way to prevent epididymitis is to perform a double vasectomy at the time of the first-stage operation, or if a one-stage operation, then at that time. Those who do not care to do this very trivial operation, must resort to the adhesive bridge or other mechanical supports, all of which are unreliable and unsatisfactory. Keeping the patient in bed for ample time, and gentleness in instrumentation and treatments help ward off this condition.

**Residual urine** results from a variety of causes, namely, contracture of bladder neck, failure to remove all gland substance with regrowth of remaining portions, occurrence of malignancy, failure to use sounds often enough and early enough, and occasionally the formation of calculi. Then the failure to get close coaptation of the edges of the wound around the prostatic fossae is probably the most frequent cause of residual urine. Care must be taken that these edges are brought together closely either by suture, the Pilcher bag, or a pack.

**Suprapubic fistula** generally comes from the same causes as residual urine, and where one is found the other exists. Any patient who has either or both of these complications at the end of a month should have a cystoscopic examination, and if tags or regrowths are present they can perhaps be fulgurated successfully.

**Uremia** is mentioned in textbooks, recent and late, as the most frequent cause of death. It was not a factor of great importance in my series of cases, and since the advent of blood chemistry and modern

kidney function tests, this complication ought to be ruled out before a patient is operated upon.

*Paralytic ileus* was not noticed in this series and in fact it is not often encountered. I have had one case and it was due to free use of magnesium sulphate by the patient without orders and too much morphine by the anesthetist before operation and by the nurse afterward.

#### SUMMARY

The percentage of deaths in this series of cases was 6 per cent. Five of the deaths were due to bronchopneumonia, which followed in the wake of the influenza epidemic raging when these patients were operated upon, and many patients who had other operations died from the same cause. There were three deaths from myocarditis following within ten days of the second stage in two cases, and occurring twelve days after a one-stage operation. Three deaths from pyelonephritis occurring fifteen, eighteen, twenty days, respectively, after the second stage of operation. Two deaths from hemorrhage occurred within forty-eight hours of operation; one a one-stage and the other a two-stage operation. One death from peritonitis occurring six days after a second-stage operation. One death from extensive cellulitis extending laterally to the bladder, in the space of Retzius, and into the scrotum three weeks after second-stage operation. Of the lesser complications, epididymitis showed a percentage of 3.6. This complication was avoided in those patients that had a vasectomy.

Residual urine occurred in 2.8 per cent, but six of the seven cases had less than an ounce and the other had three ounces. This patient had the further complication of malignancy about the bladder neck. These patients were under observation a month or less and were still having treatment with sounds and otherwise at the time they disappeared from observation, so this cannot be taken as an end-result.

Suprapubic fistula occurred in 1.2 per cent of the patients, but all were included as further complications in the cases of residual urine just mentioned. Contracture of the bladder neck occurred but once, and cystoscopic examination revealed no apparent cause; there were no tags, remains of prostatic tissue or malignancy.

In closing I wish to note as a significant finding in this series of cases that the nonprotein nitrogen in all complicated cases ranged between 35 to 50 per cent, but the other blood chemistry findings, sugar, uric acid, and creatinins were normal or nearly so. The phthalein test also was near normal in all these cases. This would lead one to believe that the nonprotein nitrogen factor is to be more seriously considered and should make one hesitate to operate on those patients who range above 35 per cent nonprotein nitrogen, even if all other factors are normal or nearly so.

#### DISCUSSION

W. B. PARKER, M.D. (Brack Shops Building, Los Angeles)—This report from the records of the Los Angeles General Hospital reflects great credit on the entire urological staff. These statistics are comparable with the records of any large hospital of similar character re-

ported to date. The percentage and average of complications are considerably less than any previously reported. All recent series reports of individual surgeons and hospitals show complications of major degree to be more infrequent. This is a gratifying consideration, undoubtedly due to careful diagnosis, better preparation and standardization of technique and post-operative care. Unfortunately no surgical patient is subject to so many complications as those operated on for prostatectomy. Despite this fact, urologists in recent years have placed prostatic surgery, perineal and suprapubic, as among the most definite of specialties.

Anesthesia is another factor of great importance, with a range of selection, which should satisfy the most meticulous in their choice of what they consider the safest for the individual patient. Local, spinal, nitrous oxide oxygen, and ethylene gas in their order seem to be those of choice for all types of prostatic and bladder surgery, especially for the known bad surgical risk.

Doctor Negley offers a very reasonable explanation as to the frequency of bronchial pneumonia, excluding the epidemic of influenza. Apropos of focal infection influences in the production of complications, following prostatectomy, great care must be exercised in their eradication. Liability of complications is always increased if focal infections are disturbed too close to or following prostatic surgery. Where any degree of emergency exists, wisdom will be shown in deferring all interference with focal infections until the attainment of a metabolic balance of safety, as referred to individual resistance.

Myocardial insufficiency, a frequent complication of the most embarrassing type, has been elucidated freely. Its occurrence, preventable to a degree by pre-operative care and digitalization, often occurs irrespective of the fame of the operator. Numerous recently reported fatalities should teach surgeons that all are born with only a definite amount of reserve to which no one can add a single iota. Conservation of reserve is responsible for the life expectancy of many post-operative prosthetics who are alive. Therefore it is almost needless to add that the future overly ambitious operator may enhance the permanency of his reputation, built up in fields of less responsibility, by refusing prostatic surgery.

Before continuing the discussion, I must confess that a statistical resumé is the most difficult of all in which to render justice.

Epididymitis is preventable by vasectomy. British urologists have practiced vasectomy as a preventive of epididymitis for several years. Dr. Granville MacGowan, consultant of the urological staff, has successfully employed this method for many years.

Acute urinary retention of prostatic origin should not be subject to immediate surgical drainage, except in cases where it is impossible to enter the bladder through the urethra. In such instances, suprapubic drainage is much to be preferred for safe decompression of bladder retention.

The present use of the indwelling urethral catheter for the preparation of cystostomy has been found invaluable, thereby establishing a three-stage prostatectomy, especially applicable to institutional urology. Noticeable exceptions to the use of the indwelling catheter in preparatory relief of prostatic retentions are: hemorrhage with clots; calculi with or without a gangrenous type of cystitis. Should the operator attempt any surgical relief other than a suprapubic cystostomy in the latter, he is to be pitied more than censured. In this type of retention, a properly performed cystostomy with extreme care as to the protection of the space of Retzius will be most appreciated. Perivesical infection anteriorly or laterally is almost inexcusable. The simple technique of protecting the perivesical tissues from infection greatly lessens the difficulty of approaching the prostate for enucleation, the bladder neck for punch removal, or the trigone for section.

The general consensus of opinion in reference to blood chemistry findings and their interpretation as to operability and accuracy of prognosis, excluding the subjective element of an individual urologist, is that the blood urea is the most sensitive and variable of the accepted group and subject to the greatest amount of error. Creatinin is the most fixed of the entire group, requiring longer in-



terpretation and more experience. Nonprotein nitrogen clinically is next, in a majority opinion of urologists. Salivary urea is unquestionably an excellent guide, and has many exponents. Combined they are possible of interpretation to a high degree of accuracy. All are subject to error singly. Exclusion of the group and the preference of one would appear to be as fallacious as disregarding blood chemistry findings entirely.

The stability value of the phthalein test applied to prostatic obstructions is subject to more variation and confusion than comparative phthalein tests applied to differential renal function for kidney surgery, the latter probably correlated with nature's compensation concerning bilateral organs, where actual knowledge remains as yet a theory.

In reviewing the literature of complications following prostatectomy with special reference to functional results, one must conclude that a number of the most distressing failures are due to an inability to visualize the mechanics of a postoperative bladder. Excluding inoperable pyonephroses, diverticula, and central nervous system diseases, a sterile urine, an easily emptied bladder with at least some reduction of frequency, should be the end-result of prostatectomy. By far too great a host have been bemoaning their poor results, due to operation by untrained surgeons, and, let us add, by urologists of the bizarre type; those, who for self-advertisement, refuse to accept well-defined methods or recognize well-established entities, simply because their name is not signed to the original article. The future better results in prostatic surgery will increase rapidly, with lessening of complication through research and standardization of technique regardless of the method of approach.

As to delayed healing, fistula and residual urine, either after suprapubic or perineal prostatectomy, most operators find there are a small percentage of patients who form granulation tissue too rapidly or with marked retardation. The endless grief of the one about offsets that of the other. Long experience probably will not aid one in forestalling a postoperative obstruction to the urinary outflow. Such a condition is just as capable of the production of partial incontinence. Fibrosis, anular and linear, or without atonicity is strictly mechanical, often remediable by discerning clinical and diagnostic means.

EDWARD W. BEACH, M. D. (304 Plaza Building, Sacramento, California).—This paper pays tribute to the skill and clinical judgment manifested by Negley and his surgical colleagues in their management of prostatic cases at the Los Angeles General Hospital. The mortalities listed in these 250 cases but confirm one's opinion that prostatectomy with our modern diagnostic aids, with our modern understanding of blood chemistry and pathology, is truly one of the "safest" of all operations in experienced hands.

I am glad to hear Negley stress the elimination of all focal infection as a link in the chain of pre-operative preparation. Certainly, oral sepsis is vitally important in all cases, especially those in which a general anesthetic is to be administered. This is perhaps more important than the many factors he has mentioned in the postoperative cases to forestall bronchopneumonia. Another factor to be considered in postoperative chest conditions in these cases is the frequency of pulmonary embolism which, I believe, is sometimes mistaken for bronchopneumonia. Prostatectomy particularly favors pulmonary embolism. It is perhaps more often seen in these cases than following any other surgical procedure and necessitates the obviation of all except very urgent rectal manipulation following operation.

To me, one of the most important complications, and quite the most serious, is hemorrhage. In doing suprapubic work we had been using the gauze-packing method up until a short time ago. This method controls hemorrhage well at the time of operation; but in removing the gauze, in stages (not to mention the pain incident to withdrawal), it is quite the usual thing to produce varying degrees of secondary bleeding even six to eight days after the operation. Repacking is most difficult. It is also most painful, and frequently requires an anesthetic. Having had two patients with frightful hemorrhages, one of which ended disastrously, I cast about for a method other than gauze or bag. The method I am now using is not original, but is closely related to that suggested

by Schoonover, with certain modifications. It consists in using the Judd retractor and a third inferiorly over the pubes to obtain a good view of the intravesicle enlargement and the orifice. Two deep chromic sutures are placed in position, postero-laterally to the orifice at the side of the intravesicle tumor and tightly tied. A clean circular cut is made about one-half inch medial to the border of the adenomatous tumor through the vesicle mucosa, and this dissected back to the edge of the adenoma. The finger then breaks through anteriorly and enucleates the prostate in the ordinary way. The dissected mucosal edge is fastened with several deeply placed interrupted sutures to and over the edge of the fossa left after the removal of the gland. In this way, very little bleeding is encountered. Even before the last sutures are placed the first two sutures control most of the bleeding. Oozing is easily controlled by hot sponges and pressure, and rarely are suture ligatures necessary other than the above. This method has an added advantage, in that it tends to do away with mucosal tags and irregularities which, at times, distort, deform and even obliterate the orifice following operation, thereby leading to a permanent suprapubic sinus and residual urine or a contracted vesicle orifice with the attendant symptoms.

I believe this method facilitates rapid healing and certainly is a decided advantage over bags and gauze.

R. L. RIGDON, M. D. (291 Geary Street, San Francisco).—Doctor Negley has presented a paper that is well worth reviewing. It bears the earmarks of veracity, and no doubt gives a true picture of the results of prostatectomy as done at the Los Angeles General Hospital by men trained in that work, assisted by a staff that is also trained in the care of these patients. Evidently there was no selection of cases, other than to determine the diagnosis of benign prostatic hypertrophy. Nothing is said of the age or other condition of the patients, but we presume these factors were such as would be found in any large general city hospital.

The mortality is given as 6 per cent, or 15 out of 250. Five of these died of bronchopneumonia following a "flu" epidemic. The onset in these patients was such as to suggest a fresh infection; certainly it was not the onset of any ordinary postoperative pneumonia. It is very probable that all of these deaths should be attributed to factors lying outside the operation. In my experience, the so-called postoperative pneumonia never comes on with coryza, sneezing, etc., but manifests itself by cough, rise in temperature, and pain. It is my opinion that in a large number of my own cases in which post-operative pneumonia was diagnosed the true etiology was to be found in emboli or infection from the wound area.

Blood pressure is certainly a sign that should be taken into account. Thomas showed by statistics that a good pulse pressure was a very valuable aid in securing a satisfactory convalescence.

The control of hemorrhage is also important, and in some instances is not as easy as is pictured. Immediate hemorrhage should be controlled before the patient leaves the operating-table. As yet we have not attained to the ideal in this particular. The subject needs further study.

It is pleasing to know that vasectomy does away with epididymitis. So far, I have relied upon well-arranged support for the testicles so as to avoid all congestion, but in spite of this, epididymitis does occur. Double vasectomy is certainly worthy of a thorough trial.

DOCTOR NEGLEY (closing).—In closing discussion, my colleagues have left little for me to say.

Thanking Doctor Rigdon for his belief in the veracity of this report and answering him as to age of patients, all had reached the "prostatic age," i. e., over 55 years.

His statement that true postoperative pneumonia almost always comes from emboli or infection from the wound, is very true and emphasizes the fact that the wound should be made clean and kept clean by closing off the space of Retzius at the time of the first stage of operation.

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Physicians must give a new significance to the word patient, for in the new order of things both sick and well people must and will be recorded in the lists of their physicians.—Wendell C. Phillips, M. D., *Journal A. M. A.*

## GIANT CELL TUMORS NOT CONNECTED WITH BONES

By LENORE D. CAMPBELL \*

*Since the one constant and outstanding feature is the presence of giant cells, and since the real nature is undetermined, the simple term "giant cell tumor" of tendons, etc., might be employed in this class of growths. The descriptive adjective "xanthic" could be used when "foam cells" and yellow color are found. The term "sarcoma" is misleading and should not be used.*

*Since their benign character has been established, amputation is to be avoided and local conservative treatment advised.*

*It would be well for all work on these cases to be reported that the exact nature and origin be more accurately determined.*

DISCUSSION by Roy W. Hammack, Los Angeles; G. Y. Rusk, San Francisco.

THE purpose of this paper is to review the pathology of this comparatively rare condition, and to report three new cases.

The literature dealing with the subject, particularly with reference to giant cell tumors of the extremities, is voluminous.

The first nonosseous myeloid tumor was recorded by Broca in 1860. Four new cases were reported during the next twenty-five years, and the number rapidly increased until in 1913 Tourneux collected fifty-four examples. Stewart and Flint in 1915 found seventeen additional cases and reported two from Leeds, bringing the total up to seventy-three. Of these, two-thirds had been published by French and German authors. Broders in 1919 reported seventeen others from the Mayo clinic. Garrett in 1924 collected thirty fibromas in tendon sheaths from Johns Hopkins, the first occurring in 1896. These, with a few others reported during the last five years, brings the total number to about 130.

There are varied opinions concerning the real nature of the growth. All of the early observers called them giant cell sarcomas. Heurteux in 1891 did the first careful study and divided them into two groups: those more embryonic and rapidly growing, and those with more adult characteristics and slower growth. Certain French observers classed them under the general name "myelome," including those of osseous and those of fibrous origin.

Dor in 1898 was the first to describe the presence of xanthoma cells, and suggested the name "myeloxanthoma." Bonjour in 1897 thought they should be in a group falling between the sarcomas and fibromas. Bonhomme in the same year regarded the growth simply as a chronic inflammatory process. Targett considered these giant cell tumors malignant. Bellamy in 1901 made a detailed study of four cases and called them myeloid endotheliomas, as did also Grant and Stewart in 1914. Tourneux believed they were sarcomas of low malignancy, and classed them as xanthic tumors with giant cells. Flessig in 1913 advanced the theory

that they were granulomatous in nature, noting their resemblance to granulation tissue, the presence of xanthoma cells, and deposits of crystalline cholesterol associated with the giant cells in one case. He suggests the name of granuloma of tendon sheaths. Dunn thought they were on the border line between tumor growths and granulomas. Broders used the noncommittal descriptive term "benign xanthic extraperiosteal tumors of the extremities containing foreign body giant cells." Ewing discusses them under giant cell sarcomas. Buxton in 1922 called his two cases giant cell myelomas. Garrett in 1924 discusses his under the general head of xanthoma, and the subheading, fibroma of tendon sheaths; referring to Bloodgood's paper in 1905 in which the same term was used. He suggests we might call them endothelio-granulomas. Den Hartog in 1924 reports two cases from Amsterdam under the title, "So-called Xantho-Sarcomas."

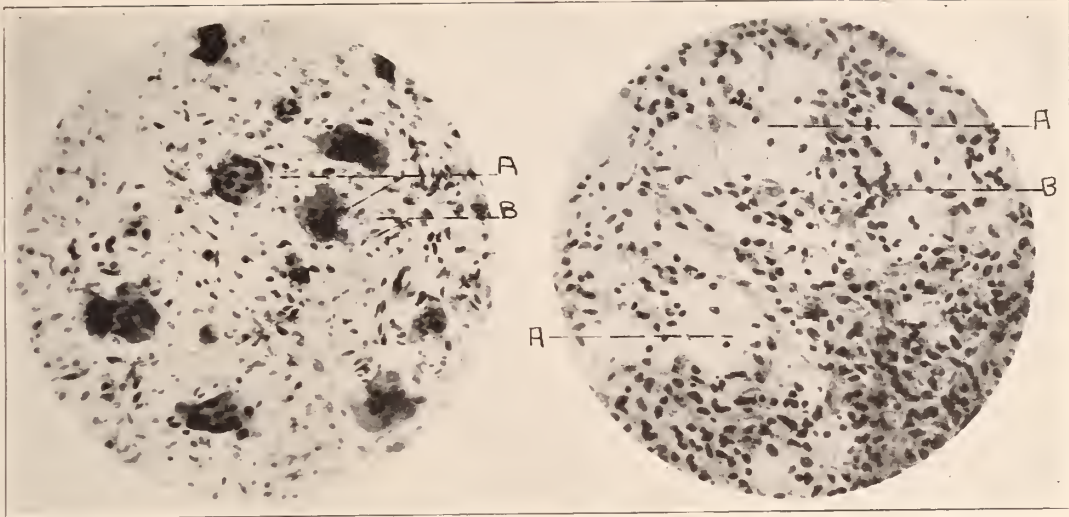
So we see all opinions have been held from that of true sarcomas to simple granulation tissue, and the vocabulary has been nearly exhausted for a suitable descriptive term. Although the exact name is unsettled, the pathology is quite definite, as well as the clinical fact that they are essentially benign and should not be classed as sarcomas.

I shall briefly summarize the clinical picture and pathology as described by others. Etiology: In one-third of the larger series there is a history of trauma or of local inflammation. Age and sex: The sexes are affected in equal numbers. No age is exempt, but they are most frequent between 10 and 20 years. Symptoms: The only complaint is of a localized swelling, usually causing no interference with function. Location: They are found principally on the tendon sheaths or aponeuroses of the hands and feet, and most frequently on the flexor tendons of the right hand (where exposed to excessive friction). They are usually single, although a few have been multiple, and one case of bilateral growths on the tendon Achilles was reported by Ollerenshaw. They are small in size and not adherent to the bone. Duration: They are of slow growth, reaching moderate dimensions after a period of one to twenty years. Malignancy: All agree they are benign when below the elbow or the knees, and possibly malignant when above. They never form metastases and rarely recur, although 15 per cent of recurrences were reported by Garrett, which were cured by a second removal. Treatment: Amputation is unnecessary and local excision is all that is required. Macroscopic appearance: The tumors are small in size, seldom reaching the size of an egg, and are hemispherical or bean-shaped. They are firm, encapsulated, gray to yellowish pink in color, and often mottled by brown patches. Cut surface shows white streaks of fibrous tissue and marked lobulation. Microscopic appearance: This presents four main features, viz.: (a) stroma; (b) cellular elements; (c) vessels; (d) degenerative changes.

(a) Stroma: A dense fibrous capsule surrounds the growth and trabeculae extend inward, forming a supporting stroma and dividing the tumor into lobules. This shows some fibroblasts, is frequently infiltrated with tumor cells, and shows hyalinization

\* Lenore D. Campbell (Loma Linda, California). M. D. College of Medical Evangelists, Loma Linda. Practice limited to Pathology. Hospital connections: Loma Linda Sanitarium and Hospital; White Memorial Hospital, Los Angeles; San Bernardino County General Hospital.





Illus. 1—Photomicrograph of tumor in Case 3.  
A—Giant cells.  
B—Tumor cells.

Illus. 2—Photomicrograph of tumor in Case 2.  
A—Xanthoma or "foam" cells.  
B—Tumor cells.

and pigment deposits. (b) Cellular elements: The mass of the tumor is made up of groups of round or polyhedral cells about 12 microns in diameter, with vesicular nuclei and distinct nucleoli. Few mitotic figures are seen. Giant cells of foreign body type are found in typical cases. They range from 9 to 100 microns in size, contain from 2 to 100 nuclei grouped centrally, and are scattered throughout the tumor. In over half the cases, xanthoma or "foam cells" are present. Broders found them in 64 per cent. These are round cells having a distinct cell membrane, a small dark nucleus, and very pale, staining cytoplasm which is filled with cholesterol lipid material. They are located in groups principally at the periphery of the growth, and give it the yellow color, hence the term "xanthic."

Wandering cells, mononuclears chiefly, are occasionally seen, but are not prominent. (c) Blood-vessels: These are abundant and frequently show signs of endothelial proliferation. Thin-walled, incompletely lined spaces are also described. (d) Degenerative changes are always present. Crystalline cholesterol deposits in the tissue spaces are noted in some instances, and the lipid material in foam cells is thought to be due to a degenerative change by some. Stewart and Flint examined frozen sections by the polarizing microscope in one of their cases, and proved a complete lack of doubly refracting lipid. Cholesterol, then, is not constantly present and probably has no etiological significance.

Hemorrhage and hematogenous pigment causes the brown patches seen grossly. The pigment deposits are composed of hemosiderin, and give a Prussian-blue reaction. It is believed to be caused by trauma and repeated hemorrhages. Calcareous deposits have been observed by some.

#### REPORT OF CASES

CASE 1—Jewish woman; age 60. Admitted to White Memorial Hospital February, 1925. Complaint: Growth on finger which began as a small nodule five months ago. No pain. No history of injury. Patient is accustomed to gardening and hard work. A small, round nodule the size of a pea was seen on the lateral surface of the left

ring finger near terminal phalanx. No tenderness or ulceration. Tumor was removed, using local anesthesia. The wound healed quickly, and there has been no recurrence to date. Gross: Small, lobulated, grayish tumor 6 mm. in diameter. Microscopic: In sections the tumor is seen 2 mm. below the surface epithelium. The structure is characteristic of the types described above, showing abundant stroma, polygonal cells arranged in strands, large number of foreign body giant cells, and a deposit of yellow-brown pigment. This is a typical example of a giant cell tumor of a tendon without xanthoma cells and giving no history of injury. The clinical course and microscopic picture confirm its benign nature.

CASE 2—Woman; age 60. Entered Loma Linda Sanitarium May, 1925, complaining of a small growth on the dorso-lateral surface of left index finger near terminal phalanx. This had been present for many years. It was removed under local anesthesia May 17. An irregular growth was found attached to the extensor tendon. Gross: Small oval-shaped flattened mass, 15 x 13 x 6 mm. in size. This is smooth, encapsulated, firm, and yellow in color. Cut surface appears lobulated, gray in central portion, and yellow with brown streaks at the periphery. Attached to this is some dense fibrous tissue in which two small flat tumors of similar appearance are embedded. Microscopic: Sections present typical structure of a giant cell tumor. There is a dense connective tissue capsule, and abundant hyalinized stroma. The smaller tumor cells show occasional mitotic figures. Giant cells are numerous, and many show marked eosinophilic cytoplasm. A few true tumor giant cells with vesicular overlapping nuclei are seen. Masses of pale-staining xanthoma cells are found at the periphery of the growth. Scharlach R stains them bright red. Much yellowish-brown pigment which gives a Prussian-blue reaction is noted. This is a second example of a tendon sheath tumor showing xanthoma cells and other characteristic findings. It differs from the usual in being multiple.

CASE 3—Irish male; age 40. Occupation: Lumberman. Admitted to Boyle Avenue Dispensary October 3, 1924. Complaint: Swelling on right side of neck, dyspnea, husky voice, and general weakness. Symptoms began two months ago. No history of injury. A large, smooth swelling in the region of the thyroid was felt on the right side. This was firm, not tender, and slightly movable. Laryngoscopic examination showed a smooth tumor mass bulging into the larynx, obliterating the view of the right vocal cord. The left cord was thick and swollen. Clinical diagnosis: Carcinoma of larynx or thyroid. Operation was performed January 26, in which a preliminary low tracheotomy was done and the larynx opened. A tumor was found bulging into the soft tissues of the neck and into the laryngeal cavity. No connection was found with any bone. It was impossible to

remove this in one mass, so it was curetted out in pieces by the surgeon, Dr. Hayton. The right cord and ala of the thyroid cartilage were also removed. Wound healed well and the patient was last seen on May 12, after he had taken a series of deep x-ray treatments. He breathes freely and could speak in a whisper. There was a slight swelling on the right side of the neck, but no glandular enlargement. It is too soon to be certain of a cure. Gross: Specimen consists of numerous irregular masses of grayish-red tissue and several pieces of cartilage, pieces ranging in size from .5 to 1.5 cm. The cut surface shows streaks and lobulation. Microscopic: This is a very cellular growth showing varied amounts of stroma. The appearance is similar to that in Case 1. There are greater numbers of giant cells which have eosinophilic cytoplasm. Some show phagocytic activity. The blood vessels show definite signs of endothelial proliferation. Mitotic figures are occasionally seen. There are numerous deposits of brown pigment giving the Prussian-blue reaction. Stains for neutral fat show collections of fine droplets, principally in the stroma. Scattered through the tumor are spicules of bone and masses of cartilage. This is a giant cell tumor similar to those of tendon sheaths, but originating in an unusual location. (The question of origin from bone is excluded by the location of growth and statements of surgeon.) Bony changes probably took place during its development.

#### SUMMARY

More than 130 cases of giant cell tumors not connected with bones have been recorded, mostly by European workers.

Various names have been applied to these growths, as xanthoma, myeloma, endothelioma, and granuloma, but none has been universally accepted.

All agree that they are benign tumors and are cured by local excision, repeated if necessary. They are most frequently located on the flexor tendons of the hands and feet, and a history of injury is obtained in about one-third of the cases.

Macroscopically, they are small, encapsulated, lobulated growths, and yellowish or pink in color. Microscopically, the characteristic features are capsule and fibrous stroma, groups of small round tumor cells, numerous foreign body giant cells, frequently xanthoma or "foam cells" and collections of hemosiderin. Two new cases of giant cell tumor of tendons are discussed.

Another incidence of giant cell tumor of similar structure is described which apparently originated in the cartilages of the larynx.

#### CONCLUSIONS

1. Since the one constant and outstanding feature is the presence of giant cells, and since the real nature is undetermined, the simple term "giant cell tumor" of tendons, etc., might be employed in this class of growths. The descriptive adjective "xanthic" could be used when "foam cells" and yellow color are found. The term "sarcoma" is misleading and should not be used.

2. Since their benign character has been established, amputation is to be avoided and local conservative treatment advised.

3. It would be well for all work on these cases to be reported that the exact nature and origin be more accurately determined.

#### DISCUSSION

ROY W. HAMMACK, M. D. (Pacific Mutual Building, Los Angeles)—Tumors of this group are not numerous and are of little clinical importance. But they may assume

great importance if, as not infrequently happens, they are wrongly interpreted. The pathological diagnosis of "giant cell sarcoma" has led to unnecessary surgery. And so I believe that Doctor Campbell is entirely right in saying that these new growths should be called "giant cell tumors" or by some other innocuous term, and not sarcoma.

While it is true that in Doctor Campbell's third case the tumor was not connected with preformed bone, the structure seems more like that of the giant cell tumors of bone, and may belong to that group rather than to the group represented by the other two cases.

G. Y. RUSK, M. D. (University of California Medical School, San Francisco)—The paper presents a valuable summary of the various ideas which have developed regarding this rather unusual type of growth found in association with tendon sheaths. That this type should be considered a true neoplasm, appears from its progressive and expansive, if benign, growth. They occur in places which are subject to trauma, and hemorrhage into their substance with secondary pigmentation may readily occur; possibly the fatty substances encountered represent lipoids of red cells, which lipoids have not been removed by the sluggish circulation of the part. The giant cells appear of foreign body type, and probably represent local irritation reactions in part associated with the lipoids. That mitoses are usually seen in small numbers may have led to their classification as sarcomata, and it becomes a matter of definition where they shall be placed. Personally I prefer to use a descriptive designation analogous to what the writer proposes.

The third case presents factors differing from the other two. From the report it appears to be of the giant cell sarcoma or epulis type, and probably the prognosis is not so favorable, especially on account of the difficulties encountered during surgical removal.

DOCTOR CAMPBELL (closing)—In closing, I wish to add a brief report of two cases which have come to my attention since writing this paper. One, the case of a woman with a small tumor of the thumb, was not unusual in any way, but presented the characteristics of this type of growth. The other was a man, age 51, who complained of a large growth on the right ankle. Thirty years before, he had sustained a bad sprain here, and three years later a small nodule appeared. This gradually grew to the present size. The growth was excised, and the patient made a rapid recovery.

The tumor measures 10 x 5 x 4.5 cm. and is surrounded by a fibrous capsule. The cut surface is yellow and brown mottled, and presents gray streaks of fibrous tissue dividing it into lobules. Sections show abundant hyalinized stroma and a few foreign body cells. The tumor cells are small and arranged in rows or groups, and large numbers of pale-staining, fat-laden cells are present. Microchemical tests show that some of these cells contain both lipid material and iron pigment. Some show a reddish color with Nile Blue sulphate and appear crystalline. This case is rather interesting, in that it is (to my knowledge) the largest growth of its kind reported, the largest in Broder's series being 8.7 cm. It is also unusual in the great predominance of lipid-containing cells.

I wish to thank Doctors Hammack and Rusk for their discussions.

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Before you start to interfere with your present bodily balance of flesh, fat and bone, make sure, with the best advice obtainable, that your present condition is not the best for you. What is "normal" for the woman next door might become a flesh burden to you. And what is normal for you might soon send her to the land of no returning. Overweight and underweight bring two distinct sets of danger signals and lead to two equally unpleasant and unsafe destinations.—The Delineator.

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The family physician of the future must have proportionate representation in the councils of his profession. No specialty or combination of specialties, not even general surgery, should be permitted to dominate the health affairs of a community or of a nation.—Wendell C. Phillips, J. A. M. A.



## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

### GAUCHER'S DISEASE

By H. J. HARA AND FRANK R. GUIDO \*

#### REPORT OF A CASE

In 1882 Gaucher first described a distinct type of splenomegaly which now bears his name. Although there have been reported in the literature nearly fifty cases of this disease, we have found none previously reported from this state. In view of this rarity, we submit the following report of a case:

H. W., a Japanese girl, born December 19, 1921, in Central California; normal birth. F. H. negative, both parents and paternal grandparents having negative blood Wassermann reactions. There are two brothers: one 3 years old, the other 1½ years. The older brother is developing physical signs similar to the patient's at the beginning of her disease. November, 1925, we noted a definite splenomegaly in him. Subsequent examinations have revealed progressive enlargement of his spleen and liver. Recently the boy had a fracture of the neck of left femur. In view of prospective splenectomy in the near future, we reserve a more complete report until a later date.

The girl has been sick much of her life. Bronchopneumonia, July, 1923; whooping cough, February, 1924; and lobar pneumonia, December, 1924. At that time the abdomen was distended, but there was no ascites. The liver was palpable and the spleen could be felt at the level of the umbilicus. There was no jaundice, although the skin had slightly muddy appearance. This was the first time we suspected the presence of a definite splenomegaly. January, 1925, she developed an acute edema of the left thigh. The swelling extended from the labia major to below the knee. The liver was enlarged to fully 5 cm. below the costal margin, the spleen extended 2.5 cm. below the umbilicus, and 5 cm. to the left of the median line. The swelling of the thigh disappeared in two weeks with no recurrence.

March, 1925, the child was taken to the Los Angeles Children's Hospital for further observation. At that time the blood Wassermann was reported 2 plus, but that has been the only time the blood Wassermann was ever positive. The abdominal examination then revealed an irregularly shaped tumor on the left side, the medial border in outline of the letter "S," extending to within 1 cm. of the median line and 2.5 cm. below the anterior crest of the ilium. There was no ascites, but there were fine pin-point hemorrhagic areas under the skin and a large hemorrhagic spot over the left knee. There was no general adenopathy; however, the skin of the leg, back, and abdomen had a mottled appearance. Several intramuscular injections of neosalvarsan were given, and as the patient got gradually worse the antiluetic treatment was discontinued, the patient leaving the hospital in three weeks. Throughout 1925 one of us called on her once or twice a month, observing the progress of the disease. The appearance of her skin remained about the same. She had frequent hemorrhages from her nose and gums. She would often squat on the floor or chair, having no apparent pain, but the progressive enlargement of her abdo-

men made it awkward to walk. Her mind was dull, but appetite remained fairly good.

December 22, 1925, the child again developed bronchopneumonia and entered the Los Angeles General Hospital. During the course of the routine examination we found her to be a diphtheria carrier. In ten days she recovered from her pneumonia, and in three weeks the Klebs-Loeffler bacilli disappeared from her throat. Up to this time the patient had a slight epistaxis every day. She perspired freely, the sweat having a sweetish odor.

**Laboratory Studies**—Wassermann blood, negative on all occasions except one; spinal, negative. Urine: Acid, 1022; no albumin; no sugar; no acetone; few epithelial cells. Icterus-index: Ten. Fragility test: Initial hemolysis at 0.46 per cent NaCl and complete hemolysis shown at 0.28 per cent. Blood chemistry: Sugar, 108 mg. per 100 cc. of blood; N. P. N., 37 mg. Bleeding time: One minute forty-five seconds.

	1/12/25	3/30/25	4/2/25	12/23/25	12/28/25	1/6/26
R. B. C.	4,470,000	4,250,000		2,980,000	2,440,000	2,344,000
W. B. C.	8,000	10,100	4,850	7,000	8,200	6,450
Hb.	78%			30%	30%	25%
S. L.	22		46	29	19	56
L. L.	15		7	6		
Polys.	63		54	59	75	40
Myelocytes				5		4
Platelets			1,500,000			993,000

**Operation**—From the above history, physical and laboratory findings a diagnosis of Gaucher's disease was made, and January 22, 1926, an operation was performed by Dr. Charles T. Sturgeon. The abdomen contained no fluid, the spleen filled the entire left abdomen and was attached by a firm adhesion to the diaphragm. The liver was enlarged to four fingers' breadth below the costal margin. There were no adhesions and the capsule was normal. The spleen, which was 20 x 13 x 3 cm. and weighed 1080 grams, was removed, as well as a triangular section of liver, and a gland at the hilus of the spleen and a left inguinal gland. A histological section was made from the specimen, and both Drs. G. D. Manor and Roy Hammack confirmed our preoperative diagnosis by finding innumerable large unique cells within the splenic pulp. Sections from the liver and glands also showed a number of Gaucher's cells.

The postoperative blood findings were:

	2/1/26	4/15/26
R. B. C.	3,450,000	4,310,000
W. B. C.	15,200	21,650
Hb.	70%	80%
S. L.	20	
L. L.	10	35
Polys.	56	64
Myelocytes	14	1

March 9, 1926, the girl was discharged from the hospital apparently cured.

### FAT EMBOLISM OF THE BRAIN

By NEWTON MILLER \*

#### REPORT OF A CASE †

A nurse, upon alighting from a street car in front of the Salt Lake County General Hospital, was struck by an automobile and hurled eight or ten feet to the edge of the pavement. The accident occurred about 12:15 a. m., Friday. Medical attention was rendered immediately. The patient was in charge of the men's surgical ward and, as far as known, was in good health.

**Physical Examination**—The patient was a well-developed, well-nourished woman, 34 years of age, and

† This case is reported through the courtesy of Dr. F. E. Straup, superintendent of the Salt Lake County General Hospital.

\* Newton Miller (Salt Lake City, Utah). M. D. Rush Medical College, 1924. A. B. 1905 and A. M. 1906, Indiana University. Appointments: Professor of Microscopic Anatomy at the University of Utah Medical School. Practice: General. Scientific organizations: Salt Lake County Medical Association, Utah State Medical Association, American Medical Association. Publications include a number of papers upon biological subjects, and among those that have a direct medical bearing are: "Gummata of the Heart"; "Anastomoses of Arteries and Veins in a Cat"; "Reproduction in the Brown Rat."

\* H. J. Hara (Moneta, California). M. D. College of Medical Evangelists, 1918. Graduate study: Glendale Sanitarium and Hospital, 1917-18. Previous honors: Instructor in Medicine, 1918-24, College of Medical Evangelists. Present hospital connections: White Memorial Hospital, Los Angeles. Present scientific organizations: Fellow of American Medical Association, California Medical Association, Los Angeles County Medical Society. Practice: General.

Frank R. Guido (Chicago, Illinois). M. D. Rush Medical College, 1925; S. B. Loyola University, Chicago, 1923. Internship, Los Angeles General Hospital. Present appointments: Instructor in Medicine, Rush Medical College. Practice: General.



Fig. 1

Photograph of the posterior part of a horizontal section through the middle portion of the right internal capsule.

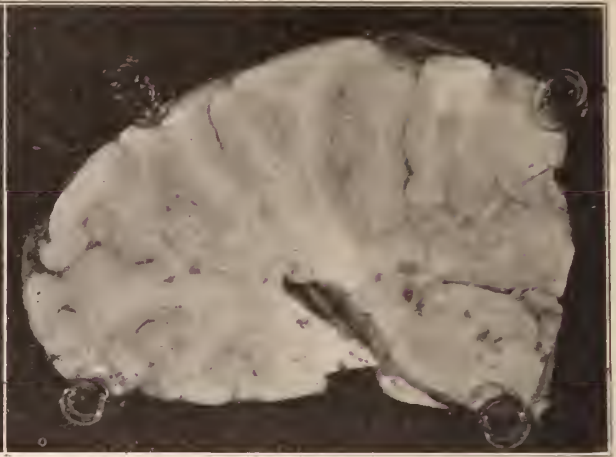


Fig. 2

Photograph of a section taken 1 cm. below and parallel to the one in Fig. 1.

weighed about 140 pounds. She was in partial shock, vomiting, and complained of headache, severe pain in the right leg, and vague pains in the body. She was fully conscious and gave a lucid account of the events leading up to and including the accident. There were slight abrasions on the face; no bleeding from the mouth, nose, or ears. The sides of the face were symmetrical. There was no ptosis, strabismus, or nystagmus. The pupils were equal, regular, about 4 mm. in diameter, and reacted to light and accommodation. There was no evidence of trauma on the chest. No abnormalities were noted in the lungs or heart, except the increase in the rate of respirations and heart beats. The abdomen was flat and without marks of trauma or areas of tenderness. There was a simple fracture in the middle third of each of the right tibia and fibula; no other evidence of injury on the extremities; no limitation of active or passive movements.

One hour after the accident the patient was anesthetized with ether, the fracture reduced, and the leg placed in a Thomas splint. The day and night were passed without any noticeable untoward symptoms. The patient was apparently still sleeping at 8:30 a. m. Saturday. She was reported to be in partial coma two hours later, with some spasticity, especially of the muscles of the right brachium. The spasticity proved to be intermittent, which caused some confusion among the doctors who could not always demonstrate the rigidity. Involuntary urination began at 11 a. m., at which time only  $1\frac{1}{2}$  ounces of urine were obtained by catheterization. The left pupil was reported to be a little more dilated than the right. X-ray plates of the skull gave no positive evidence of a fracture. However, a constant horizontal line across the left parietal about 4 cm. above the level of the external auditory meatus was suggestive of a fracture. At 9 p. m. the patient could not be aroused. Her respirations were more frequent; her pulse rate, 132; blood pressure, 122/74; temperature, 101.5 degrees F. At 8 a. m., Sunday, the oculist recorded a 20-degree divergence of the eyes, but no inequality of the pupils. The optic discs were slightly blurred and the retinal veins enlarged. The latter were considered to be within the range of normality. Deep coma persisted, and there was little change noted except frequent flexion and extension of the left thigh. A spinal puncture was made at 11 a. m., and the fluid which was obtained was clear and fell in drops from the trochar.

A subtemporal decompression was decided upon after several consultations, although no conclusive signs of intracranial pressure existed. The calvarium was opened through the right parietal at 12:30 p. m. An echymotic area 2 cm. in diameter was divided in incising the scalp. The parietal was highly vascular, and some difficulty was experienced in controlling the bleeding. The meninges were intact, and no extravasated blood was found. There was no bulging of the meninges, and the brain fell away from the calvarium at the opening. The meninges were not incised. A fracture could not be demonstrated. The

rapid failing of the patient necessitated an intravenous injection of normal saline and adrenalin before the wound was closed. After leaving the operating-room, the condition of the patient grew gradually worse with the temperature steadily rising, the pulse rate increasing, and the respirations becoming irregular. Supportive measures had very little effect upon the subsequent course. The blood pressure at 8 p. m. was 106/60. Death occurred at 11:50.

*Necropsy*—The examination was limited to the head. The scalp had been shaved. There was no change in the scalp except a small amount of echymosis about the operative wound. The incised bones were 6 to 9 mm. thick. There was no fracture of the skull. The meninges were free from extravasated blood except at the site of the operative wound. There was no gross change in the vessels of the leptomeninges. The subarachnoid fluid was clear. The cortex was intact at all points, and no echymoses or petechiae were visible in it. All of the convolutions were smooth and rounded. Upon sectioning the brain, numerous petechial hemorrhages, fusiform, 0.5 to 3 mm. long, circular in cross section, 0.1 to 1.5 mm. in diameter, were seen throughout the white substance. None was found in the cortex or basal ganglia. These hemor-



Fig. 3

Microphotograph of a paraffin section made from the right occipital radiation. Three stages of resorption of the petechiae are represented.



rhagic spots were discrete for the most part and most numerous in the internal capsules, cerebral peduncles, corpus callosum, pons and medulla (Figs. 1 and 2). The ventricular fluid was clear. There was no alteration in the size or shape of the ventricles.

**Microscopic Examination**—The hemorrhages were the only changes noted in the brain. The petechiae were limited to the white substance and measured 0.05 to 3 mm. in diameter. One or more capillaries or arterioles occupied the central part, as a rule, of each transverse section of a petechia. These vessels, in paraffin sections, were empty and distended; in frozen sections, they were filled with fat. The most common type of petechiae had a vessel centrally located and filled with fat, about which was a pale blue layer with cell outlines but no nuclei. Encircling this was an outer and broader layer containing many lymphocytes and erythrocytes. The latter in some petechiae stained deeply, while in others only the outlines were present (Fig. 3, the central petechiae). Hemosiderin was in abundance. In another type all of the red cells stained deeply were packed about the vessels and infiltrated the brain substance. An occasional lymphocyte was present, and also a variable amount of hemosiderin. In a small per cent the nervous tissue was torn. The extravasated cells in some instances were confined to the perivascular lymph spaces. A third type had a small number of lymphocytes in the outer margin of the petechia, with no intact blood cells between these and the vessels. Red cells were absent. The involved brain tissue was unchanged except for the presence of a small amount of hemosiderin and nuclear fragments (Fig. 3, petechiae at the top and right). Fat, engorged vessels without perivascular changes were found elsewhere than in the petechiae.

#### CONCLUSIONS

1. There were numerous petechial hemorrhages confined to the white substance of the brain and presumably of the cord also.
2. Fat filled the capillaries and arterioles within the petechiae.
3. Fat, engorged vessels were found elsewhere than in the petechiae.
4. Emboli evidently began lodging in the brain soon after the accident, and continued to do so up to or near the time of death.
5. Definite cerebral symptoms appeared within thirty hours after the injury.
6. Death was due to the impairment of important fiber tracts.

## CONGENITAL ABSENCE OF THE LOWER PORTION OF THE RECTUM AND ANUS

By PAUL R. WALTERS, M. D., *Dinuba, California*

#### REPORT OF A CASE

The following report is made because of the infrequency of this abnormality (Keen states this condition occurs about once in every eight to ten thousand births, and that it is very common for this defect to be overlooked at birth), and secondly to emphasize the importance of careful examination of the entire body of the newborn child.

On the afternoon of the 19th day of September, 1923, while in the midst of a busy afternoon's office practice, I received a telephone call to come five miles into the country to see a woman who had just delivered herself of an infant three weeks premature, this being her fourth child. Hastily bundling up my obstetrical outfit and with my office nurse, we proceeded as rapidly as possible to find the mother in bed with her female (7½ pounds) baby still attached to the cord and the placenta still undelivered. The cord was ligated and severed and the child handed to the nurse to be cleansed, during which time I made delivery of the placenta. Instructions as to the care of the mother and child were given to the so-called practical nurse, who was to take care of this patient in her very humble home, and, after having an affirmative reply that everything was all right to the question asked my nurse,

we jumped into the car and drove back to the office to resume the afternoon's work.

On September 21, forty-eight hours later, I received a second call to the house. The message was as follows: "Doctor, come quick, the baby is all swelled up and cannot move its bowels." Arriving upon the scene, a careful examination was made of the baby. I found the child's abdomen distended and tympanitic, the pulse very fast, and the baby screaming with pain. There was an entire absence of the anus and the anal dimple. The history from the woman in charge of the baby was that it had voided urine several times, a dark color, but had begun crying in the morning. She had administered castor oil to make the bowels move, but no results. Owing to the distension of the abdomen, it was impossible to make out any of the abdominal organs. It was explained to the father and mother that an operation was urgently needed. The child was taken to the Dinuba Sanitarium at 4 p. m. and, under ether anesthesia, an incision was made on the left side, just below the umbilicus, corresponding to a left McBurney's. Upon entering the abdominal cavity, the intestine bulged through the incision and interfered considerably with a careful examination. Digital examination, however, revealed the rectum terminating in a blind pouch, the end of the pouch on a level with a line drawn through the pubis horizontally, the funnel-shaped end of this pouch terminating in a hard fibrous cord, running toward that space between the posterior vaginal wall and the coccyx. It was decided that it was impossible to draw this pouch down and put the opening in the region of the normal anus. Instead an emergency left inguinal cholestomy was done. Owing to the lack of preparation of the patient and distension of the entire intestinal tract and smallness of the baby, we feared the baby would not survive the operation. And to our surprise the child made a rapid recovery from the operation, remaining in the hospital from September 21 to October 10. During this time the baby gained in weight, ate and slept well, being fed on artificial food (modified milk). There was an average of three bowel movements a day of semi-solid character through the small cholestomy opening. The child was kept clean by using slight pressure on the site of the opening. At the time the child left the hospital it was progressing very well. Owing to the poverty of the family and their inability to financially take care of the baby, the County Welfare Nurse moved the child to the County Hospital twenty miles away. It remained in the County Hospital ten months, during which time it grew and developed rapidly. When the child was eleven months old, a surgeon attempted to operate upon the baby and create an artificial anus in the normal position. The baby died on the operating table.

Da Costa states that there are two forms of this abnormality: One in which the rectum empties into the bladder, vagina or rectum, and another in which there is no rectal opening, either upon the surface of the body or the urinary organs.

Keen's figure 82, page 119, volume 4, corresponds to the anatomical abnormality found in this patient. Keen, under the classification of Imperforate Anus, divides the abnormality into four types: (1) congenital narrowing of anus without complete occlusion or without fecal fistulas elsewhere; (2) closure of anus by thin membranous tissue; (3) entire absence of anus, the rectum ending in a blind pouch at varying distances from the perineum; and (4) imperforate anus with fecal fistulas opening (a) into uterus and vagina; (b) into male bladder or urethra; (c) or on the surface of the body.

My case corresponds with Keen's No. 3 type.

Keiler states that a study of the factors involved will make it apparent that an imperforate anus will mean anything from the mere persistence of a cloacal membrane to a total lack of development of the rectal or the anal part of the canal.

Keith, in 1908, dissected and described 114 specimens of imperforate anus which he was able to procure from London museums. He grouped the more usual abnormalities which he found into two diagrams, according to the sex of the infant, and states that it seems that the patient with a normally formed anal pit has a less serious deformity. The interesting portion of Keiler's report to

the surgeon is as follows: The importance of obtaining that information as to whether the rectal canal is properly developed, and in such cases it is important, if possible, to obtain this information before operating. If x-ray facilities are available, and there has been time for gas to accumulate, the gas may show the lower limit of the rectum. Opaque meals or injections are, by the nature of the case, impossible. Occasionally the urorectal septum, in separating the rectum from the urogenital sinus, carries too deeply with it the peritoneal covering which forms the pouch of Douglas in the female and the vesicorectal fossa in the male. Under such circumstances the peritoneum may pass under the lower extremity of the rectum and the peritoneal cavity may be entered in the attempt to reach the rectum from below.

There is seldom any way by which the operator can obtain information on this point before he commences his dissection, and his only safeguard is to bear this danger constantly in mind, and be prepared to protect the peritoneal cavity from infection should he inadvertently or of necessity enter it.

The particularly interesting facts of the case reported above are: (1) absence of the anal pit; (2) height in the abdomen of the blind pouch; (3) the peculiar and interesting fibrous cord-like tissue running from end of the pouch to the coccygeal region; (4) failure of recognizing the deformity at the time of the delivery; (5) the excellent recovery and growth of the child from time of the emergency operation until the second operation; and lastly nonadherence to the rule laid down by Keen, not to attempt to make restoration of the parts while the child is so young.

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## INTERNAL HEMORRHOIDS IN AN INFANT

By LLOYD A. CLARY, M. D., *San Francisco*

#### REPORT OF A CASE

Some of the older writers on rectal diseases flatly deny the existence of true internal hemorrhoids in infancy. Other authors—including those of today—either do not mention the subject at all or state that the disease is exceedingly rare. Pediatricians practically ignore the subject. No report of this condition appears in current medical literature during the past ten years.

Baby V., a boy, age 26 months, was brought to my clinic at the French Hospital, April 1, 1926. He was a precocious child, stood at 6 months, walked and talked at 9 months of age.

Since 8 months of age he has had protrusion from anus following straining at stool. He always had to strain at stool, though the mother stated that he was never constipated. Bleeding appeared at the time the protrusion was first noticed, occurred with bowel movement and was copious at times. Pain with bowel movements was marked. Pain, bleeding and protrusion have been growing worse during the past two months. The baby had become nervous and fretful and slept very poorly.

Under the direction of her family physician the mother had been using vaseline and had been dilating the anal canal with her finger.

Examination was very easy, as the baby had been trained to bear down when told to do so by his mother. On his straining down, two large internal hemorrhoids, right and left posterior, were forced out. Anoscope was inserted easily and smaller hemorrhoids found anteriorly. No other pathological condition found.

I hesitated to advise operation in so young a child. However, the mother desired a tonsillectomy, so I agreed

to operate at the time the tonsillectomy was to be done to save an additional anesthetic.

Operation under ether anesthesia, April 6, 1926. Due to recent catharsis the hemorrhoids were all protruding at the time of operation. They were enormous for a child, especially the two posterior, and would have been considered large even for an adult. There were four distinct hemorrhoidal masses of the internal thrombotic type, right and left posterior, and right and left anterior. They were covered entirely by mucous membrane and did not involve the skin surface. There was no prolapse of the rectum. Each hemorrhoid was dissected out, excised and the wounds closed with fine plain catgut.

The child was up and around the day after operation and left the hospital April 10, 1926.

On June 17, 1926, the mother brought him to my office. The parts were healed perfectly. She stated that the nervousness had disappeared and that the child had been sleeping well since the operation. He has free bowel movements daily without straining.

This was a case of true internal hemorrhoids in an infant and was not one of rectal prolapse. Results of operation apparently are good.

1195 Bush Street.

**Sympathectomy in Angina Pectoris**—From a consideration of seven cases reported on by Elliott C. Cutler and Jacob Fine, Cleveland (J. A. M. A.), it becomes evident that a single or bilateral extirpation of the superior cervical ganglion or of the entire cervical chain and first dorsal ganglion for the relief of angina pectoris will frequently give temporary, complete or partial relief and often will fail. The complete operation is less likely to fail entirely, however, than simple superior ganglionectomy. In certain cases it appears that what was considered a leftsided angina before operation has been converted into a rightsided angina by a left Jonnesco procedure. This, however, means that the leftsided angina was relieved and the residual rightsided angina, not noticed by the patient preoperatively because of its comparative insignificance, now remains. Contrary to the conception of the anatomic factors involved, from which it would seem that proper sensory nerve ablations ought to stop the pain immediately afterward, certain patients eventually totally relieved, even after complete bilateral Jonnesco procedure, will still have pain, as a rule reduced in severity, postoperatively for a few weeks or months. This is ample evidence to indicate the insufficiency of knowledge concerning the sensory innervation of the heart. The authors have in no case observed any deleterious effects on the cardiac capacity of the patient as a result of operation. A few have expressed the opinion that cases of syphilitic angina are particularly dangerous cases for operation. Cutler and Fine feel that the cases that are particularly dangerous are those which present advanced cerebral arteriosclerosis combined with severe coronary disease. They will not tolerate any surgical procedure well, and it seems as if sympathectomy makes them definitely worse, although it may relieve the pain. Among the most distressing postoperative complications of the procedure are the by-effects of sympathectomy, which seem to be directly proportional to the degree of nerve resection. That surgery will come to have a definite place in angina pectoris seems promising, but it is impossible as yet to say definitely which is the most desirable procedure of those proposed. Cutler and Fine lean in favor of the partial Jonnesco procedure, unilateral or bilateral, depending on the individual case.

The notion that a majority must have its way, whether in matters of opinion or in matters of personal conduct, is as pestilent and antidemocratic a notion as can possibly be conceived. The majority has no function whatever in matters of opinion or personal conduct, and can have none unless all morality is to be abandoned. The rule of the majority is simply a working plan to decide upon policies in matters of common or general concern.—Nicholas Murray Butler.

Beware of the filthy, friendly, fraternizing food-fertilizing fly.—Ohio Health News.



## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### BRIEF OF EVIDENCE THAT WARRANTS SURGICAL INTERVENTION IN PULMONARY TUBERCULOSIS

The Editor—The subject discussed here was suggested by a doctor, himself a sufferer from the disease, and who could not make up his mind to follow the advice of some of his colleagues to try surgical intervention; nor could he be satisfied that other advice against surgery promised enough. Unquestionably, resting the diseased part of a lung by surgically produced pressure proves of decided value to many patients. On the other hand, it endangers the welfare of other patients.

Is it not probable that too many cases of tuberculosis are being treated by standardized methods and not enough patients treated by carefully studied-out methods based upon equally careful diagnosis? If any thinking person has a doubt about the *individualism* of sick people, there are lessons enough in the study of patients with tuberculosis to open his eyes.

There is food for serious reflection in the illuminating discussion which constitutes this chapter of *Bedside Medicine for Bedside Doctors*. We don't know that there is anything "new" in this discussion. We hope not, because it is not the exploiting of the "new" that is of first consideration to the bedside doctor, but the practical, honest, earnest, intelligent application of existing knowledge that counts most. There is much here that will help if in no other way than by causing the doctor to pause, consider, reflect, study.

We are still delighted with the hearty and encouraging messages that come to us commending *Bedside Medicine for Bedside Doctors*. We are glad to have any suggestions, so send them in.

Leo Eloesser, M. D. (490 Post Street, San Francisco)—Artificial pneumothorax has become well established as a valuable method of treating certain forms of mainly unilateral pulmonary tuberculosis. It has been fairly generally used for the last twenty years; there are statistics at hand embodying the results of numerous prolonged observations which make us as certain as ever we can be of any method of therapy, that compression of the lung by air introduced into the pleural cavity is of benefit in certain cases of tuberculosis. The evidence is so definite that it is but a step farther to seek to extend the benefit of pneumothorax to those cases that needed it but in which adhesions between the two layers of pleura prevented its induction. Attempts were made to sever these adhesions by open operation: these attempts were abandoned; the results, with few exceptions, did not warrant the risk of so gross and sudden an insult.

There remained two further possibilities: to compress the lung indirectly by influencing the two structures which, by their rigidity, resisted the natural shrinkage seen in many—in practically all—old, chronic, mainly unilateral tuberculosis; these two structures being the ribcage and the diaphragm. The third structure confining the lung, the mediastinum, is mobile enough to yield by itself. The ribcage is far more rigid and more important than the diaphragm; its excursions make up about three-fourths or four-fifths of the act of breathing, leaving for the diaphragm one-fourth or one-fifth. Logically, then, if

compression of a tubercular lung is desirable but unattainable technically owing to pleural adhesions, and if an open severance of these adhesions is impractical, we are driven to a consideration of compression either by removing the resistance of the ribcage or of the diaphragm, or both; provided always that these operations entail no greater shock or risk than a tubercular patient may reasonably be expected to weather, and that their results have the same benefits as the procedure which they were designed to supplant, viz., artificial pneumothorax.

A sufficient period of observation and a considerable body of statistics, covering now well over one thousand cases, prove that these operations do, in fact, do what was expected of them and do not exceed the limits of the proviso: that they do compress the lung and that their risk is not great. The resistance of the ribcage is overcome by resection of a small portion of all of the ribs, letting the ribs collapse like the shutters of a Venetian blind; the diaphragm is paralyzed and allowed to rise by resection (evulsion) of the main phrenic nerve together with its subsidiary branches. The latter operation is the simpler and easier one, but, as may be expected, alone it is usually insufficient; it is of value as an aid to thoracoplasty and to certain cases of partial artificial pneumothorax. Thoracoplasty has definitely established its value.

The results, taken from a large body of statistics, are roughly: cure one-third; improvement one-third; course of disease uninfluenced and death one-third. The material being recruited from among tubercular patients whom medical care has been unable to cure and whose outlook is bad, the one-third of cured patients may be considered as clear gain, the one-third benefited as respite for a greater or lesser time from the doom awaiting them, and the remaining third of failures as but completing the sentence pronounced upon them by their disease.

F. M. Pottenger, M. D.\* (Monrovia, California)—In discussing chest surgery it is necessary to bear in mind that we are considering measures devised to relieve a condition which should rarely, if ever, be permitted to exist. This measure is only applicable when the disease has extended to such a degree that a complete healing is practically impossible without some aid beyond that of the ordinary

\* Francis Marion Pottenger (Pottenger Sanatorium, Monrovia, Calif.). M. D. Cincinnati College of Medicine and Surgery, 1894. Other Degrees: Otterbein College, Westerville, O., Ph. B., 1892; Ph. M., 1897; A. M., 1905; LL. D. (honorary), 1909. Graduate Study: Postgraduate medical course in Europe, 1894, 1905, 1907, 1909; and in New York in 1900. Previous Honors: Lecturer Tuberculosis and Climatology, Depart. of Medicine, Univ. of Southern California, 1903-04; Professor of Clinical Medicine, Univ. of Southern California, 1905-09; Professor of Diseases of the Chest, Coll. of Physicians and Surgeons of Univ. of Southern California, 1914-20; Founder and for three years President of Southern Calif. Anti-Tuberculosis League, 1903-05; Chief of Helping Station, Southern California Anti-Tuberculosis League, 1906-08. Present Hospital Connections: Medical Director of Pottenger Sanatorium. Scientific Organizations: Member Los An-

curative measures. Let us not forget to emphasize the fact that there is a time in the course of early tuberculosis when nearly every patient could be restored to health if he were given adequate treatment—adequate both as to the character of the treatment instituted and as to its duration. The treatment of tuberculosis should be directed to this early period, resulting in the cure of the disease and the restoring of the patient to usefulness rather than to the late period when often the best results obtainable produce only in the prolongation of life accompanied by a reduction in efficiency and a condition of semi-invalidism. Regardless of the fact that we are able to diagnose the disease early and restore nearly all of those suffering from early tuberculosis to usefulness, it is an almost universal experience on the part of those who are especially prepared by study and equipment to treat the disease successfully that they find themselves caring largely for advanced cases of tuberculosis. While quite a proportion of such patients can be restored to a clinical healing and economic usefulness, there are many of them who cannot, without some aid from measures directed toward relief of the mechanical hindrance to healing presented by the rigid bony cage. It is our duty to do the best we can, even if a satisfactory result cannot be attained. Consequently, it is not strange that the physician should attempt to devise methods offering the best possible chance for cure or relief to every patient who asks for treatment.

It must be borne in mind that tuberculosis for the most part shows a marked tendency to heal, even in patients with extensive and advanced lesions. Aside from inherited resistance there is a specific resistance due to infections in early life which have healed and also built up during the early stages of clinical activity. This enables patients to overcome extensive processes. There is marked individual difference in reaction toward tuberculosis on the part of different patients. Aside from difference in natural resistance exhibited by different patients, there are certain very important mechanical factors which influence the end result, as mentioned by Eloesser. Tuberculosis is a disease which is naturally asso-

ciated with many compensatory changes within the thoracic cavity—contraction of infected tissue and enlargements of the normal or more nearly normal. If the mediastinum is free and the pleural spaces are not encroached upon by adhesions, or obliterated, healing is greatly facilitated because compensation can take place readily. In this connection, I also wish to point out the importance of a large pericardium, permitting the heart to move readily. It is in instances in which the normal compensation cannot take place between different parts of the diseased lung, or the two lungs, that surgery is particularly indicated. There is some agitation at this time for surgery to take the place of pneumothorax in cases that are now being treated by it. I doubt the wisdom of this. It is an important thing for any patient who has had a destructive process in the lung to preserve as much breathing space as possible. When a resection has once been done the maximum collapse takes place, while the use of pneumothorax permits the lung to expand after healing has been accomplished, with the regaining of a considerable amount of useful tissue.

Until the principles of chest surgery have been well worked out patients should be very carefully chosen and the operation should be one with caution, with due knowledge and regard for the mechanics of the thorax. At present it is still on trial, but if restricted to properly chosen cases and done with a close co-operation of one who understands chest surgery and the clinician who understands pulmonary tuberculosis, it will probably prove to be a very valuable asset to our therapeutic measures. These operations, while apparently simple, require much judgment and a thorough understanding of the mechanics of the chest as well as the disease tuberculosis to be carried out successfully.

Charles D. Lockwood, M. D.\* (295 Markham Place, Pasadena)—Little progress was made in the scientific treatment of tuberculosis until the value of physiological rest was recognized and applied in the treatment of this disease. The application of this principle to all forms of the disease marked a distinct advance in treatment. In pulmonary tuberculosis the recognition of the curative value of rest led to the establishment of sanatoria where bodily rest and dietetic treatment could be rigidly enforced. Up to ten years ago the pulmonary form of the disease was regarded as strictly in the domain of internal medicine, and surgical treatment was regarded as wholly unjustifiable.

The first attempt to secure physiological rest by surgical means consisted of strapping the chest wall with adhesive in the manner long and successfully employed in the treatment of acute pleurisy. Physicians have long recognized the value of pleural exudates in the healing of inflammatory conditions in the pleura and lungs. This is nature's way of inducing rest by means of compression and immobilization of the lung. It is only a step from this procedure to the artificial introduction of a compressing medium—nitrogen or air—into the pleural space. The experimental and clinical work of the late J. B.

geles County Medical Society (Pres. 1906-07); Los Angeles Clinical and Pathological Society (Pres. 1923-24); Southern California Med. Society (Pres. 1912-13); Amer. Therapeutic Society (Pres. 1914-15); Mississippi Valley Med. Association (Pres. 1917-19); C. M. A.; A. M. A.; Amer. Climatological and Clinical Association; Amer. Allergic Society; Pacific Interurban Clinical Club; Assn. for the Study of Internal Secretions (Secy. 1917—); Fellow Amer. College of Physicians (Councillor 1916-23; Regent 1923—); Member Amer. Congress on Internal Medicine (Councillor 1916-23); Amer. Pub. Health Assn.; Amer. Sanatorium Assn. (Pres. 1924-25); Local, National and International Associations for the Study and Prevention of Tuberculosis (Director Los Angeles Tuberculosis Assn., 1924—); Eugenics Society of the U. S. of America; Amer. Association for the Advancement of Science. Present Appointments: Regent and Member of the Executive Committee of Amer. College of Physicians; Member of Editorial Council of "Annals of Clinical Medicine," official organ of Amer. College of Physicians; Member of Board of Directors of Los Angeles Tuberculosis Association; Board of Trustees of Otterbein College, Westerville, O. Practice limited to Diseases of the Lungs and Throat since 1901; general practice from 1894 until 1901. Publications: "Pulmonary Tuberculosis," Wm. Wood & Co., 1908; "Muscle Spasm and Degeneration in Intrathoracic Inflammation and Light Touch Palpation," C. V. Mosby Co., St. Louis, 1912; "Tuberculin in Diagnosis and Treatment," C. V. Mosby Co., St. Louis, 1913; "Clinical Tuberculosis," two vols., C. V. Mosby Co. (1st ed. 1917, 2nd ed. 1922); "Symptoms of Visceral Disease," C. V. Mosby Co., 1919 (2nd ed. 1922, 3rd ed. 1925); "Tuberculosis and How to Combat It," C. V. Mosby Co., 1921. More than 200 papers in periodic medical publications.

\* For bibliography data see May, 1926, issue, California and Western Medicine, page 642.



Murphy placed the method of pneumothorax in pulmonary tuberculosis upon a secure basis.

Combined with bodily rest and sanitarium treatment, pneumothorax has been the accepted method of treating this form of the disease up to a comparatively recent time. Pneumothorax, while a minor surgical procedure, has been left in the hands of the physician and tuberculosis specialist, as pointed out by Eloesser. It has been found that a large percentage of patients are not amenable to pneumothorax because of adhesions. These are the most advanced and hopeless ones. Although a strong tendency to fibrosis most favorable to the healing of tuberculosis cavities exists, in such patients dense bands of adhesions tie the lung to the inner chest wall and prevent the contraction necessary to lung collapse and healing cavities. These constitute the long, drawn-out fatal cases of pulmonary tuberculosis.

It is surprising that the value of surgery was not long ago recognized for this type of patient. The obvious thing is to divide the bands of adhesions if they are well defined and few in number, thus releasing the lung and allowing nature's method of healing to continue. This operation is called "pneumolysis" and may be done by rib resection under local anesthesia with little danger to the patient. It has also been done by Jacobaeus by means of a special instrument which punctures the chest wall and enables the operator to divide the adhesions under direct vision.

Patients with more extensive adhesions associated with abscesses in the upper lobe and with comparatively sound lungs upon the opposite side constitute the most serious and fatal group. It is in this group, however, that surgery is attaining its most brilliant successes. Here multiple rib resection, i. e., extra pleural thoracoplasty, accomplishes what nature does in favorable cases and what the less serious surgical procedure of pneumolysis and pneumothorax do in suitable cases.

All of these procedures conform to the same law operative in the healing of a tuberculous lung, i. e., rest. Thoracoplasty allows the chest wall to fall in and compress the diseased lung, thus putting it at rest and emptying the abscesses in the central portion of the lung of pus and toxic debris.

There is but one consideration that deters the surgeon in the full employment of thoracoplasty, and that is the deforming effect of such extensive rib resections. It should be employed only in well selected cases where other conservative and less deforming methods have failed. It is my belief, however, that with increasing knowledge on the part of the tuberculosis specialist in the selection of cases and improved technique on the part of the surgeon, the indications for surgical treatment will be greatly enlarged and that physicians will learn to distinguish early the type of case that inevitably goes on to a fatal termination and which by early surgery might be arrested.

**Philip H. Pierson, M. D.\*** (490 Post Street, San Francisco) — Surgical intervention in pulmonary tuberculosis is *indicated* naturally only in those in-

stances where careful, thorough and scientific medical care has been tried and found to offer the patient no further hope of a cure, or arrest, of his disease. It is *justifiable* in this selected group when the patient's condition warrants the surgical procedure, and when this offers a reasonable hope for arrestment, or cure, of his disease.

This can be accomplished in a few instances by splints, or sand bags, or posture, which I will not discuss further, but much more frequently by lung collapse. An early recognition of this outlook will lead us to institute artificial pneumothorax while it is still possible, few or no adhesions being present. If pneumothorax accomplishes the collapse of the cavity or sufficient of the diseased area to relieve toxicity and favor fibrosis, we have accomplished our aim. In other words, I think our criterion of success or failure must be largely clinical rather than radiological. If our collapse has left undone that which we set out to do, or if because of adhesions no collapse was possible, surgery should be considered seriously. I need not mention lobectomy or ligation of branches of the pulmonary artery, for they carry a mortality which has excluded their use at any rate in tuberculosis. Extrapleural thoracoplasty and evulsion of the phrenic nerve have proved of great value to many patients with unilateral tuberculosis and cavitation where pneumothorax was impossible.

In conclusion let me say that the earlier recognition of patients who should be treated by pneumothorax will allow this procedure to be done satisfactorily because adhesions will not prevent. Our degree of cure, or arrest, by pneumothorax should be determined by the patient's condition, sputum, temperature, weight and ability to work, etc., rather than the x-ray appearance of a lung partially collapsed. Thoracoplasty in those patients in whom pneumothorax has been tried and failed, and whose condition is still good, often brings relief and cure—a status that otherwise would have been denied our patient.

**Dow H. Ransom, M. D.\*** (Madera, California) — Chest surgery for the relief of pulmonary tuberculosis, while necessarily considered under several heads, has for its objective, rest of the lung. I will lay stress on only one of the surgical procedures,

Board, World War. Present Hospital Connections: Chief of Chest Clinic, Stanford Medical School and Hospital. Scientific Organizations: San Francisco County Medical Society; C. M. A.; A. M. A.; California Academy of Medicine. Present Appointments: Associate Clinical Professor at Stanford, teaching tuberculosis; appointment in U. S. Army Reserve pending. Practice limited to Internal Medicine, particularly Diseases of the Chest, since 1915. Publications: Chapter, Diseases of the Lungs, George Blumer Edition of Billings-Forchheimer's Therapeutics of Internal Diseases; "Post Influenzal Lung Conditions," M. Clin. N. Amer.; "Adequate Institutional Care of the Tuberculous," California State J. M.; "Tortula in Man," Boston M. and S. J.; "Basal Metabolic Rate in Tuberculous Women," Am. Rev. Tuberc.; "Hemoptysis in Children," Arch. Pediat.; "Tuberculosis of the Eyes," California State J. M.; "The Interrelationship of Asthma and Tuberculosis," Calif. State J. M.; "Healed Generalized Military Tuberculosis," Am. Rev. Tuberc.; "Spontaneous Pneumothorax," California State J. Med.

\* Ransom, Dow Harvey (107 South D Street, Madera). M. D. Cooper Medical College, 1907. Graduate Study: Internship St. Luke's Hospital, San Francisco. Previous Honors: Lt. M. C., U. S. A., 1918. Present Hospital Connections: Proprietor and Manager Madera Sanitarium. Present Scientific Organizations: Fresno County Medical Society; C. M. A.; A. M. A. Practice limited to Surgery since 1920.

\* Philip H. Pierson (490 Post Street, San Francisco). M. D. Harvard, 1913; B. A. Yale, 1908. Graduate Study: House Officer, Massachusetts General Hospital; Good Samaritan Hospital, Brookline, Mass.; Clifton Springs Sanitarium, New York. Previous Honors: Member Draft

namely, induction of artificial pneumothorax—its indications, contraindications, and dangers.

It finds its application to a great extent in neglected patients. By neglected I mean patients in whom the disease probably could have been arrested by early and prolonged medical treatment. As the great mass of tuberculous patients are neglected in the early stage of the disease, and will be for many years to come, any procedure which will assist medical treatment will be welcomed by the phthisiologist. All active cases should be under the care and supervision of a medical specialist. Patients who have yielded the best results under artificial pneumothorax induction are (a) those who have failed to respond to medical treatment; (b) those with pulmonary hemorrhage. In this condition it often gives spectacular results; (c) those with pleuritic effusion which does not respond to rest, and the usual remedial measures are usually improved by aspirating part of the fluid and admitting an equal volume of nitrogen. This may be repeated at intervals of one or two months for a year or two; (d) in the early fibrous type of tuberculous lung artificial pneumothorax gives excellent results; (e) in general, there is "all to gain and nothing to lose" in applying it where medical treatment is not checking the disease. This is especially true of unilateral lung involvement.

Pneumothorax is manifestly contraindicated where serious complications exist, such as advanced cardiac disease, nephritis (either acute or chronic), decided displacement of the heart, dyspnea, chronic alcoholism, rapidly acute cases, those with extensive tuberculosis outside of the respiratory organs, those with advanced bilateral involvement, emphysema, and in the aged. Its field of usefulness is, however, being broadened year by year.

Regarding the dangers of introducing gas or air into the pleural cavity, a mere mention of a few of them will suffice to show that they are more theoretical than real. Injury of the lung, gas embolism, and pleural shock can usually be avoided by careful and skilful technique. Infection of the pleural sac should never occur under modern aseptic technique. Practically all accidents in this operation may be avoided by performing it only with suitable facilities and under favorable surroundings.

**W. C. Shipley, M. D.\*** (Cloverdale Hospital, Cloverdale)—My experience with surgical intervention in pulmonary tuberculosis is not extensive enough to warrant my discussing the subject. During the past decade I have sent two patients to sanatoria for treatment upon whom artificial pneumothorax was tried. Both patients died.

**Robert A. Peers, M. D.\*** (Colfax, California)—Tuberculosis is a very strange disease, and the

reaction of the individual human being to infection by the tubercle bacillus cannot in any way be predicted. The disease varies with individual patients in the manner of its onset, in the signs and symptoms which accompany its course after the disease has once become established and in the results obtained once treatment is commenced. There are two particulars in which no physician, however wide his experience, can enlighten the patient who comes to him for treatment: (a) He cannot tell whether the individual patient will recover or not; (b) he cannot tell how long a time will elapse before recovery or before death intervenes in those patients in whom treatment is unsuccessful. These two statements hold good no matter how mild the infection may appear or how limited the extent of the disease may be.

Patients may be divided into three classes in respect to the manner of their reaction to the presence of active tuberculosis: (1) A small group who apparently recover from the disease irrespective of the extent of their lesion and, sometimes, seemingly irrespective of the method of treatment employed; (2) another small group whose disease progresses irrespective of the best of care and in spite of early diagnosis; and (3) the larger group composed of individuals who will get well or die whether or not they receive treatment early and whether or not treatment is prolonged.

As intimated above, there is no instrument of precision by which any physician is able to judge how the individual patient will react to his disease and to treatment. There is, however, one thing that we do definitely know; and that is that the two most important factors in the cure of tuberculosis are rest and time. We also know pretty definitely that artificial pneumothorax is a tremendous aid in treatment in certain carefully selected patients and that many who would die if given medical treatment alone recover their health and usefulness as a result of pneumothorax treatment. It must be remembered, however, that once pneumothorax is commenced the lung compression must be kept up for a long period of time and that the patient is tied to a physician and, for a number of years, is no longer a free agent able to go and come as he pleases.

We also have sufficient evidence to make us feel reasonably certain that thoracoplasty in very carefully selected patients and operated on by surgeons of good judgment and skill will prolong the lives and in many cases restore to health individuals who, because of certain mechanical difficulties, are not suitable for a pneumothorax compression.

There is no doubt in my mind that artificial pneumothorax and thoracoplasty are wonderful agents for good in the treatment of certain types of tuberculosis. Bearing in mind, however, that no one is able to predict the course of the disease in the individual patient and knowing that certain individuals with extensive lesions and extremely bad prognosis overcome their disease without resort to surgical measures, it is my belief that medical treatment should always first be tried for patients with pulmonary tuberculosis. Only when the disease continues progressive in spite of rest and other appropriate regimen, should surgical intervention be considered. Artificial pneumothorax is a very simple measure when no extensive adhesions exist. Even

\* Shipley, William C. (Cloverdale, California). M. D. California Medical College, 1900. General practice. Hospital connections: Owner and director of Cloverdale Hospital. Scientific organizations: Member Sonoma County Medical Society, Pacific Association R. R. Surgeons, American Association R. R. Surgeons.

\* Peers, Robert A. (Colfax, California). M. D., C. M. Trinity University, Toronto, 1899. Fellow of Trinity Medical College, 1899. Practice limited to tuberculosis since 1909. Hospital connections: Medical Director, Colfax School for the Tuberculous, Colfax, California. Appointments: Member of the California State Board of Health. Scientific organizations: County, State and A. M. A.; County, State and National Tuberculosis Association; Fellow American College of Physicians.



where only partial collapse is obtainable the results are sometimes very remarkable. But the reaction of the patient to pneumothorax is also something which cannot be predicted. But in spite of this uncertainty I believe that patients who are doing badly under ordinary treatment, except those with advanced bilateral lesions, should be given the benefit of artificial pneumothorax. In fact even some patients with extensive bilateral lesions respond favorably to the treatment. I have under my care at the present time a patient with advanced tuberculosis of both lungs with extensive cavitation of both apices where partial compression of both lungs had produced very marked improvement in the patient's condition.

The remarks regarding artificial pneumothorax apply largely to the operation of thoracoplasty except that here one has to be more careful in the selection of his patients and he ordinarily has to deal with those with a more unfavorable prognosis.

In conclusion, the most important factor in influencing the physician or surgeon in attempting surgical measures for the relief and cure of pulmonary tuberculosis is that those patients for whom these measures are particularly indicated are individuals who would otherwise die if they were not given the benefit of surgery. Every patient restored to health by surgery is a life saved; while those who fail to recover have not been harmed, as they would have died had surgical intervention not been attempted.

**E. Rosencrantz, M. D.** (San Francisco Hospital)—Those who have had a wide experience with pulmonary tuberculosis must be impressed with the inadequate methods available for a cure in a large proportion of patients with early and moderately advanced lesions, and also with the utter hopelessness of many with advanced lesions. In making this statement I bear in mind that the first two types of patients may do remarkably well while kept in bed constantly in the open air and under medical supervision in a sanatorium. However, let those patients go out into the world and live the ordinary life of a man or woman free from pulmonary tuberculosis and, in spite of the vast improvement previously made, they very often soon break down and return far worse off than when they left the sanatorium.

In surgery of the chest we have a very definite adjunct to the cure of pulmonary tuberculosis, although its usefulness is limited to a comparatively few patients; this is largely because most of the patients when diagnosed already have bilateral lesions. Artificial pneumothorax should be used only if the patient does not respond to the ordinary hygienic modern sanatorium treatment. At least there should be six weeks of observation before the operation is performed. The procedure is most useful in checking large and persistent haemoptysis when one is sure of the source of the hemorrhage. It was for such a condition that the operation was first performed by Cayley of England in 1885.

There are two disadvantages of the treatment: (a) The long time it takes for the repeated refills covers from eighteen months to two years, and the permanence or otherwise of the results depends upon the after care, as well as on patients not operated on; (b) according to Rist of the Laennec Hospital, Paris, effusion develops in 50 per cent of the pa-

tients, and the hydro-pneumothorax thus caused is a very difficult condition to cure. Osler believed this was due to an injury to the lung during the operation.

The usefulness of thoracoplasty cannot be overestimated in the cases of tuberculous pyopneumothorax. There is no other method by which pus in such a pathological condition can be permanently removed. The results are most spectacular and remarkable. In a patient running a septic temperature as high as 103 to 104 every evening for many weeks, the temperature may drop to normal immediately following the first stage of the operation in an almost dramatic manner. It remains so throughout, unless there is an interference with the drainage. The general condition of the patient improves uninterruptedly, this of course depending upon the general care and open-air treatment. No one who has followed such a patient before or after the operation could possibly doubt the efficacy of the treatment.

In none of the cases have the patients objected because of the deformity of the chest following the operation. This can hardly be considered when compared to the satisfactory results obtained.

**Joseph W. Cook, M. D.** (Banning, California)—It is with a certain degree of hesitation that I discuss this question, but as against my comparative lack of experience my interest in pulmonary tuberculosis from the point of view of a patient encourages me to raise a few questions.

Does surgical treatment of pulmonary tuberculosis cure?

I find this definite statement by Lambert and Miller in concluding a recent paper: "Cases so operated upon still have their tuberculosis and must undergo prolonged after-treatment along approved methods of treatment of that disease, especially rest," and Lilienthal adds, "The surgeon must never lose sight of the fact that, although the wound may heal and his immediate objective be reached, his patient still has tuberculosis and will long require medical and hygienic treatment."

Amberson concluded his paper on thoracoplasty in tuberculosis, "like pneumothorax, thoracoplasty in itself does not remove the tuberculosis. The surgeon sets the stage for better healing, and then, under the supervision of the physician, the patient continues hygienic rest treatment until such healing is attained. To neglect this is to thwart the possible good effect of surgery."

Several years ago a doctor who himself was using pneumothorax extensively began to have serious hemorrhages. Pottenger and Browning saw him with me. Pneumothorax was suggested, but the doctor in utter dismay refused it and shortly thereafter died. Possibly this occurrence has led me to think too much of the human side of the patient and to consider his feelings. These attributed feelings are of course influenced by my own, and I question most emphatically if I should myself be willing to submit to either pneumothorax or thoracoplasty.

Does surgical intervention not increase the patient's dependence upon doctors and therefore put this slight hope beyond the reach of all but a small minority of tubercular patients? As Peers so well says, "It must be remembered that once pneumo-

thorax is commenced, the lung compression must be kept up for a long period of time and that the patient is tied to a physician, and for a number of years is no longer a free agent to go and come as he pleases." This statement is almost condemnatory, especially as he continues, "No one is able to predict the course of the disease in the individual patient. Certain individuals with extensive lesions and extremely bad prognosis overcome their disease without resort to surgical measures."

Is this form of treatment so popular in certain quarters because of a hopeless attitude toward tuberculosis in general?

In our desire to restore our patients to normal state, have we not become obsessed with a desire to recreate new lungs and, failing in this, have we not become oppressed with hopelessness and turned to attempted obliteration of the lung insofar as we dare?

In spite of all this some patients are restored to a certain degree of economic cure, but without this despairing surgery many are likewise restored.

If Calmette's statement is correct that one-sixth of the total volume of the lungs is sufficient to sustain life, are we not justified in changing our attitude somewhat toward our patients? Can we not stop thinking of our patients only in terms of lungs, cavities, râles, and areas involved, and while recognizing our patients' dependence on their lung condition, ask not how good or how bad the lungs are, but will they do the work?

Granting as I do the value of pneumothorax and thoracoplasty in some well-selected cases, I appeal for more consideration for the patient as an individual, rather than as a case. He is more than a pair of lungs, one of which is diseased and must be obliterated. With his limited lung capacity he may live a longer and more useful life than the surgeon—possibly a shorter life, but none the less useful. Instead of welding patients to ourselves with chains of surgical dependence, let us first in every other possible way endeavor to pry our patients loose from us and set them free to face again the world free men and economic cures. "Idealism," said a patient of mine not long ago, "is the only cure for tuberculosis." Awaken hope and idealism in even an advanced case and rehabilitation may be accomplished, not always because of the unknown mysterious factors involved in life, but then, too, only a small percentage of surgically treated patients get well. Swezey and Schonbar, in the February number of the American Review of Tuberculosis, say of pneumothorax: "While the balance of evidence seem to be slightly in favor of this treatment, yet, considering the frequency of complications resulting from this treatment in such cases, it is probably best not to be too optimistic about it unless the treatment becomes imperative for the purpose of controlling hemorrhage."

But after due consideration of all factors and proper consideration of the patient and all it implies to him we decide on surgical treatment, then I have nothing to say to the patient except, "It is the best we can do and we trust it is best for you."

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**Cancer, Vitamin Imbalance and Roentgen-Ray Activity**—Further report is made by Montrose T. Burrows, Louis H. Jorstad and Edwin C. Ernst, St. Louis (Journal A. M. A.), on their experiments dealing with the rela-

tionship in an etiologic way of certain dietary constituents and cancer. In the light of these studies, cancer is only the result of anything that leads to an excessive production of vitamin B or removes the vitamin A or growth inhibitor from small areas of tissue in the body. Roentgen rays act only to increase the vitamin B content in the tissues. In the proper dosage, therefore, it may produce cancer as it may through the excessive production of vitamin B destroy cancer. Cancer is only the result of a vitamin imbalance. Normal life depends on a proper balance between vitamins A and B. The problem of the cure of cancer is the restoration of this balance. The problem of the prevention of cancer is the prevention of such imbalances taking place. Roentgen rays act on the organism to produce vitamin B. Larger doses of these rays lead to the liberation of larger amounts of vitamin B with a secondary production of vitamin A. These larger doses of roentgen rays lead always to an early exhaustion of the ray, while larger doses repeated over long intervals do not cause this early exhaustion. The roentgen ray becomes important in the cure of cancer in that it liberates an excess of the archusia or vitamin B from the cells when given in the proper doses. As must be noted the cancerous tissue contains already a high content ( $S^3$ ) of the archusia. Only a slight stimulation is sufficient to increase this amount to a value of  $S^4$  which causes the cells to degenerate. The normal tissue contains much less archusia. The same dose acting on them may not even cause them to grow. The first problem for the advance of roentgen-ray therapy is a proper and well-controlled dosage. The second problem is to produce the proper reaction in the surrounding normal tissues. Too great a dose on these tissues must cause a decrease in blood supply and make them more favorable for the spread of the cancer. The prevention of this spread of the cancer is the protection of the blood vascular system in these regions. As shown above, the vascular system is only the path of the inflow of the vitamins from without. It is maintained through a proper balance of vitamins A and B. The progress in roentgen-ray therapy, as is evident from these studies, will come first through the establishment of a uniform method of measuring (one of us has undertaken and instituted methods for such procedure), and the establishment of proper dietary and nutritional conditions in the patient before such therapy is instituted.

#### Etiology and Treatment of Pernicious Anemia—

Though the causes of pernicious anemia are not yet fully known, clues to their nature are being obtained. In any consideration of etiology, Lewellys F. Barker, Baltimore (Journal A. M. A.), says due attention should be paid to the peculiarities of incidence and distribution of the disease; to the fact that it is predominantly a malady of middle and later life; to the characteristic features of the blood picture and their relations to blood destruction within phagocytes and to blood regeneration of embryonal type; to the associated disturbances of the digestive, nervous and endocrine systems; to certain special marks in the bodily configuration; to the occurrence of spontaneous and of therapeutically inducible remissions of variable duration, and to the inevitability, in the present state of knowledge, of a fatal termination. Of the many conceptions of etiology that have been advanced, the evidence at present favors hereditary (genotypic) predisposition as the main factor and various influences in the external conditions (especially poisons derived from bacteria, fungi or animal parasites in the digestive tract) as accessory releasing or provocative factors. Parallel with the growth of hypotheses of etiology, conceptions of pathogenesis are being extended; the causes of the disturbances of equilibrium between blood destruction and blood regeneration (and their antecedents) are becoming clearer; the anemia is recognized as only one part of a comprehensive disease entity in which the digestive system, the nervous system, and the endocrine system are also involved, and investigators are now striving to establish correlatives among the various phenomena observable and to find the precise place in the malady as a whole that should be assigned each integral part. Treatment of the disease though not curative is rewarding.



## FURTHER ATTEMPTS TO CONTROL DOCTORS BY FEDERAL BUREAUS

Being a transcript of the evidence of W. C. Woodward, executive secretary of the Bureau of Legal Medicine and Legislation, A. M. A., given before the committee of Congress in hearings on bills designed by the Treasury Department to strengthen the Harrison Narcotic Law.

*Mr. Editor*—Notwithstanding the intimations of the Supreme Court that certain features of the Harrison Narcotic Act might be in danger if presented in proper form before the court, the federal bureau charged with the enforcement of the act attempted to have Congress give them even greater power to regulate the practice of medicine.

The report of the hearings before the Committee of the House of Representatives on May 21, 22, and 26, 1926, is interesting reading to every physician as indicative of the attitude of the tax-collecting bureau of our government in medical matters.

William C. Woodward of the A. M. A. appeared before the committee and gave testimony which so well represents the position of physicians that it is published in full.

The report, which may be obtained from the government printing office, contains much other important evidence and, in view of the certainty that the subject will be before our legislature this winter, persons interested should study the complete report:

### STATEMENT OF DR. WILLIAM C. WOODWARD, CHICAGO, ILLINOIS, REPRESENTING THE AMERICAN MEDICAL ASSOCIATION

*MR. HADLEY*—You may state your name and whom you represent.

*DOCTOR WOODWARD*—My name is William C. Woodward of Chicago, Illinois. I represent the American Medical Association.

*MR. HADLEY*—What is your relation to the Association?

*DOCTOR WOODWARD*—I am the executive secretary, as they term it, of the Bureau of Legal Medicine and Legislation.

*MR. HADLEY*—Very well. Proceed.

*DOCTOR WOODWARD*—I think it would be well to get a background of this pending legislation, in order to determine its possible effect on future court decisions. Serious doubt has been cast on the constitutionality of the Harrison Narcotic Act, even in its present form. The Supreme Court of the United States, on January 4, 1926, in *United States v. Daugherty*, said:

The constitutionality of the antinarcotic act, touching which this court so sharply divided in *United States v. Doremus* (249 U. S. 86), was not raised below and has not been again considered. The doctrine approved in *Hammer v. Dagenhart* (247 U. S. 251); *Child Labor Tax case* (259 U. S. 20); *Hill v. Wallace* (259 U. S. 44, 67); and *Linder v. United States* (268 U. S. 5) may necessitate a review of that question if hereafter properly presented.

The constitutionality of the act was passed on in the *Doremus case* (249 U. S. 86), decided March 3, 1919, and the act was held to be constitutional by a majority opinion; but the report notes:

The chief justice dissents, because he is of opinion that the court below correctly held the act of Congress, insofar as it embraced the matters complained of, to be beyond the constitutional power of Congress to enact, because to such extent the statute was a mere attempt by Congress to exert a power not delegated; that is, the reserved police power of the state.

In that dissenting opinion Justices McKenna, Van Devanter, and McReynolds concurred. That particular case turned on the question of whether a physician who prescribed narcotics in excessive quantities for a drug addict was prescribing in the course of his professional practice. As you can see, the courts regard that as, at least, a very doubtful question. If we add further restrictions, such as are proposed here, in the nature of police regulations, I think it is only pushing the act a little further toward the brink of the grave.

The child labor tax case is of extreme interest at the present moment, the child labor law being analogous to the Harrison Narcotic Act in that Congress undertook to regulate child labor in the several states by imposing a tax on those who employed such labor.

*MR. CROWTHER*—That has been declared unconstitutional.

*DOCTOR WOODWARD*—That has been declared unconstitutional.

*MR. CROWTHER*—Is it analogous?

*DOCTOR WOODWARD*—It is analogous, and the case in which the child labor law was declared unconstitutional is referred to by the Supreme Court as one of the cases that may lead the court to revise its decision as to the constitutionality of the Harrison Narcotic Act. In the course of the opinion in the child labor tax case the court said:

Does this law impose a tax with only that incidental restraint and regulation which in fact must inevitably involve? Or does it regulate by the use of the so-called tax as a penalty? If a tax, it is clearly an excise. If it were an excise on a commodity or other thing of value we might not be permitted, under previous decisions of this court, to infer solely from its heavy burden that the act intends a prohibition instead of a tax. But this act does more. It provides a heavy exaction for a departure from a detailed and specified course of conduct in business.

*MR. HADLEY*—What case is that from?

*DOCTOR WOODWARD*—That is the child labor case (259 U. S. 20) decided March 15, 1922.

Grant the validity of this law, and all that Congress would have to do hereafter, in seeking to take over to its control any one of the great number of subjects of public interest, jurisdiction of which the state have never parted with, and which are reserved to them by the tenth amendment, would be to enact a detailed measure of complete regulation of the subject and enforce it by a so-called tax upon departures from it. To give such magic to the word "tax" would be to break down all constitutional limitation of the powers of Congress and completely wipe out the sovereignty of the state.

*MR. HADLEY*—Is that last paragraph you just read analogous in principle to the one involved here?

*DOCTOR WOODWARD*—Exactly. The proposition of the Harrison Narcotic Act at the present time is simply that it is imposing a certain tax and adding certain regulations to that tax.

*MR. HADLEY*—I had in mind whether Congress might not possess some other constitutional power under which we can proceed to regulate in that way, regardless of the jurisdiction of the states.

*DOCTOR WOODWARD*—There is no other constitutional power, and the further we go toward regulation the further we are going to jeopardize the act. And I think all of us will agree that it is desirable that nothing be done that will jeopardize the act. I am only pointing these things out to indicate that we should be cautious lest we go too far.

Now, coming to the bill itself. We have the provision on page 2, lines 1 to 9, relative to prohibition of registration to narcotic addicts.

*MR. FAUST*—That applies to doctors?

*DOCTOR WOODWARD*—It applies to doctors, dentists, wholesale dealers, and registrants generally. I think it has been definitely decided in *Starnes v. Rose*, referred to here yesterday, that the present law does not authorize a Commissioner of Internal Revenue to refuse registration to anyone who is entitled by law of the state to deal in all the several drugs that call for registration, either the manufacturer, the dealer in drugs, wholesale or retail, or the prescriber. That is clearly a state function. In that case (282 Fed. 336), decided by the District Court of the Northern District of Georgia on July 21, 1922, the court said:

The act is not a licensing act whose aim is to control the dispensing of narcotics by confining their dispensation to proper persons, for that is an exercise of police power not possessed as to opiates by Congress. The act rests on the power to tax, and its provisions for registration and its restrictions upon the dispensation of narcotics are for the purpose of safeguarding the tax on the dispenser and on the drug.

Further the court goes on to say:

But to prohibit a practicing physician from prescribing narcotics unless he registers, and then to refuse to register him, would to that extent be to prohibit or regulate his practice of medicine, being within the province of the

state and not of the United States, and in contradiction of the revenue purposes of the act.

And further on:

To determine who may properly practice medicine and otherwise dispense drugs belongs to the agencies of the state.

To the same effect substantially is the case of *Linder v. United States*, in the United States Supreme Court, decided April 13, 1925, wherein the court said in part:

The declared object of the narcotic law is to provide revenue, and this court has held that whatever additional moral ends it may have in view must be reached only through a revenue measure and within the limits of a revenue measure.

The court here cites *United States v. Jin Fuey Moy* (241 U. S. 394). And further on the court says:

Congress cannot, under the pretense of executing delegated power, pass laws for the accomplishment of objects not intrusted to the Federal Government. And we accept as established doctrine that any provision of an act of Congress ostensibly enacted under the power granted by the Constitution, not naturally and reasonably adapted to the effective exercise of such power, but solely to the achievement of something plainly within the power reserved to the states, is invalid and cannot be enforced.

MR. HADLEY—What subject had the court under review there?

DOCTOR WOODWARD—That was a case of a physician in the state of Washington, in Spokane, who had given a narcotic addict four tablets, as I recall it, one of one-fourth grain of morphine and three of cocaine. The addict, a woman, had been sent to the physician by narcotic agents. She pretended to have pains in her abdomen and that sort of thing. The physician gave her from his own supplies these four tablets. Thereupon he was charged with having violated the narcotic act. He carried the case to the United States Supreme Court, and the Supreme Court held he had a right to do what he did do.

MR. CROWTHER—They were trying to make a case when they sent the woman there?

DOCTOR WOODWARD—They were trying to make a case. Further on the court says:

Obviously direct control of medical practice in the states is beyond the power of the Federal Government.

These are very clear reasons, it seems to me, why Congress cannot undertake to say that a license shall be refused to a physician who is a narcotic addict. That, however, does not leave the Federal Government helpless, because the states themselves have already in most cases cared for the situation. Already twenty-nine states and three territories have on their statute books specific provisions that authorize the revocation of the license of a physician if he is a narcotic addict. Some cases provide that he must be a narcotic addict to a sufficient extent to interfere with his practice of medicine. In other states there is no specific provision providing for the revocation of the license of a physician because he is a narcotic addict, but there are provisions authorizing the revocation if he is guilty of unprofessional conduct, which I believe, in many cases at least, would cover the situation.

I am told that the records in the narcotic division with reference to the prevalence of narcotic addicts among physicians are confidential records; that the narcotic division does not feel under any obligations to bring these cases to the attention of state medical examining boards, and in support of that attitude I am cited to a regulation of the Secretary of the Treasury applying to the records of the department generally, that forbids the giving of any information except with the consent of the Commissioner of Internal Revenue. Of course, in a case of that kind, the commissioner could give the consent or the Secretary of the Treasury could very readily amend that regulation. It would take some time on the part of the narcotic officers of the Government to develop these cases before these medical licensing boards, but I think that such work is part of their duty. If you can eliminate these doctors, by all means do it.

But a partial elimination is worse than none. To say to a physician who is known to be a narcotic addict: "You may not register under the Harrison Narcotic Act and, therefore, you may not prescribe narcotics for your patients," leaves him to obtain his own supply from the underworld, as he certainly will. It leaves him, furthermore, to practice among his patients, seriously handi-

capped because he cannot use, for their benefit, a very essential lot of drugs—the narcotics. This would in the end render the situation worse than if the physician were registered.

Furthermore, if the physician is not allowed to register under the Harrison Narcotic Act, the Federal Government has no jurisdiction over him, with respect to the matter of prescribing narcotics. The only way the Federal Government obtains jurisdiction is by taxing him. In the case of the *United States v. Jin Fuey Moy* (241 U. S. 394), decided June 5, 1916, it was held that the possession of narcotic drugs by an addict who was not within any of the classes required to register was not evidence of any violation of any law on his part. The law being a tax law, it applies only to the persons who are required to pay the tax and to register. By refusing them registration, you would be putting the men whom you desire to control beyond your control.

I may safely say that physicians regard this proposed elimination of narcotic addicts in this way as unwise. The physicians regard as wise and proper the total elimination of those men from medical practice in the ordinary channels.

MR. DICKINSON—By the states?

DOCTOR WOODWARD—By the states, and there are already twenty-nine states and three territories that cover the situation by their laws.

MR. CROWTHER—When a state finds a man has been prosecuted by the Federal Government and found guilty of dispensing narcotics to an addict, does the state medical society take action to annul his license?

DOCTOR WOODWARD—The state medical society does not take the initiative in those cases.

MR. CROWTHER—I mean the licensing board of the state.

DOCTOR WOODWARD—I think they have done it only occasionally, because they have no evidence. Of course, the conviction would be a matter of record, but knowing the state medical examining boards as I do, I feel sure they seldom get official notice of a conviction. My recollection is that in Iowa, under some recent legislation, it is made the duty of the prosecuting attorney to bring such conviction to the attention of the board, with a view to the revocation of the defendant's license.

MR. HADLEY—The machinery could very easily be perfected so as to require that kind of showing before the state authorities.

DOCTOR WOODWARD—Yes, sir.

MR. CROWTHER—Does the Federal Government, when they run across a case of that kind, make a report to the licensing board of the state? Do they submit any evidence to them that a certain physician is an improper person to practice medicine?

MR. TENNYSON—No, sir. We do not consider we have authority. If it is a matter of conviction, it is a matter of court records, and those records are as public to those boards as they are to us.

MR. CROWTHER—But if they are not looking for them, they will not find them. It seems to me, when there are convictions, the Government should send copies of the record to the state licensing boards and give them an opportunity to bar them from practice.

MR. TENNYSON—We would gladly do that, if we can do it.

DOCTOR WOODWARD—I have a letter here on the subject, if you care to have it read.

MR. CROWTHER—Do you not think it would be a good thing to notify the licensing boards of the states of convictions?

DOCTOR WOODWARD—I think it would be time well spent.

Another feature of the proposed refusal to register addicts is the determination as to what is an addict, and how the determination is to be made. It is provided here very definitely that:

Any person addicted to the habitual use of opium or cocoa leaves, or any compound, manufacture, salt, derivative, or preparation thereof, when such use is not in the course of professional practice only, shall not be allowed to register under this act.

I am quite sure that phrase "when such use is not in the course of professional practice only" is surplusage, because I cannot conceive of being addicted to the habitual use of narcotics "in the course of his professional practice." I think it is intended to provide that if any person



uses any of the drugs named, habitually, registration will be refused to him. How is the fact to be determined? Will the physician be allowed to be heard? The proposal as it stands seems arbitrary, and it seems to me unwise.

With respect to the next provision in the act, page 2, lines 10 to 14, which provides:

That in addition to any penalty which may be imposed under Section 9 hereof, any person hereafter convicted of a violation of this act shall not be granted registration under this act for a period of one year from the first day of July next following the date of such conviction.

In this particular case you are applying a rather severe penalty to what may be a very minor infraction of the law. A physician is required to renew his registration not later than June 30 of each year. He may forget it and prescribe narcotic drugs for two or three days. He has violated the law. If he is convicted he is put in the same position with respect to revocation of his registration as the most persistent convicted dope peddler is. This provision is arbitrary and unreasonable and calls for an excessive punishment.

The punishment is excessive in a way that does not appear on the surface. If a physician is convicted of a violation of the Harrison Narcotic Act, he suffers not only as to the fine he is called on to pay, but he loses to a certain extent his reputation and his practice. It is very hard to dissociate conviction under the Harrison Narcotic Act from the peddling of dope. A man may live it down, but under the provision here proposed a man for a minor infraction of the law must go on for a year or two without the right to prescribe narcotics. His patients suffer, and every time he is asked why he cannot relieve them it becomes known that he is a man who has in some way violated the Harrison Narcotic Act.

MR. CROWTHER—If he needed narcotics he could get them.

DOCTOR WOODWARD—He would have to call in a consulting physician. Of course, that would not prevent him from continuing his practice. He could keep right on practicing. He would either have to call in a consulting physician if his patients needed narcotics, or he would have to get them from peddlers and dispense them to his patients. He would never do the latter, because that would get him into further trouble. However, when you tell a physician he shall not register, then the United States has no jurisdiction over him except such as it has over persons generally.

Taking the cases I referred to, and the principles laid down in the Child Labor Tax case and other cases. When the Federal Government says to a man who is licensed by the state to practice medicine that he may not practice medicine so far as the use of narcotics is concerned, I think beyond question the Federal Government is undertaking to regulate the practice of medicine in the state. It is in a sense saying to the state government: You may license a man to practice medicine, but you may not license this man to practice medicine beyond a certain point.

There is another feature with reference to this withholding of registration that I think makes it particularly obnoxious to the physician, and that is that it will enable the Bureau of Internal Revenue to hold a club over the heads of the physicians to a greater extent than it does at the present time. Most cases against registered persons that are brought to a termination are terminated by compromise. I have taken these figures from the report of the Commissioner of Internal Revenue for the year ending June 30, 1925, page 31. During that year 2254 charges were brought against registered persons. Of that number 1185, or 47.43 per cent, were compromised. The doctor, rather than go into court, losing time and money and his reputation, is perfectly willing to pay and a compromise is effected. Of course, the more serious the case is the more willing he will be to compromise. But how well substantiated are the charges that are brought? You can answer, I think, from the fact that of the 854 cases in which charges were brought and compromises were not effected, 72 per cent were dropped. In 7 out of 10 cases the charges were abandoned. But the mere threat of court prosecution which might involve loss of registration for two years would constitute an enormous club in the hands of the Commissioner of Internal Revenue.

No physician would dare go into court, and we do want the right to test every issue in court, if we must.

Now, we come to the question of ambulatory treatment. The American Medical Association has very definitely taken a stand on the question of ambulatory treatment of narcotic addicts. There are very few narcotic addicts that are permanently cured, whether treated by the ambulatory method or otherwise; but in the case of the ambulatory treatment it is practically impossible to control the situation. The patient will get a certain amount of narcotics from one doctor, and a certain amount from another doctor, under another name. Or when one doctor begins to cut down the supply, he will go to another doctor and get a bigger dose. But the figures that have been given here, I think I may fairly say, are not representative figures. They represent the results of the dispensary treatment, where you get the lowest group in the narcotic world. But to say, as this bill proposes, to this lawyer, or to this government official, or to this doctor, who is earnestly desirous of being cured of his habit, and who for professional or business reasons could not afford very well to go into a narcotic asylum for treatment, that he cannot take treatments while he continues his business, no matter how sincere he may be, is, I believe, going a little far. Furthermore, I do not believe the Federal Government has the right to go into the state and deny any kind of treatment that the state itself may approve.

We have the further possibility, of course, that we may find methods of ambulatory treatment that would be more satisfactory than the present method. If we had an act of Congress that absolutely forbade ambulatory treatment, we would be barred. We could not even try out a new method. I do not believe that, even if you should feel you were justified in forbidding ambulatory treatment, it should be forbidden outright, but as far as you should go would be to provide that if physicians undertake to treat narcotic addicts by ambulatory treatment such physicians should be especially licensed by the Commissioner of Internal Revenue, so there might be some control or supervision of the method. If there were a withdrawal of ambulatory treatment of all narcotic addicts we could not accommodate them in the hospitals and asylums of the country. I do not believe there are enough beds to accommodate them, and I am quite sure that even if there were many that many an addict would be utterly without resources to provide himself with treatment.

As to the matter of keeping records, we stand squarely with the pharmacists, that there is more record keeping now than is productive of results. If you consider how many persons are registered and how many entries that would have to be made every day you will find there would be a mass of documentary evidence that would fill a library every week or two, and that the narcotic division could not possibly make effective use of it, and the burden would fall on the honest and conscientious man who would keep honest records, while the very man whom the Commissioner of Internal Revenue and the narcotic division desire to reach is the man who will falsify his records. We do not believe that any good can be accomplished.

The trouble with these records is that penalties are sometimes imposed for what is certainly not a very serious infraction. I have here a letter under date of March 31, 1926, that I think I may fairly say is a type. I sympathize with Colonel Nutt in having to deal with a very large number of agents in a very large territory who, like the rest of us, are of all classes. I do not know anything about this particular agency, but this is what the letter says:

Recently I was visited by two federal narcotic agents who examined my records. The records were found to be correct, but the narcotic record book was about three weeks behind, although my daybook was up to date. My system is to enter records in my daybook and then copy them to the narcotic record book.

Today I received a letter charging me with failing to keep records as acquired. (Section 2.)

They give me the privilege under Section 3229 Revised Statutes of tendering voluntarily an offer of compromise. Forms 656 were inclosed.

The agents stated that as the records were behind I should write a letter of explanation. As I was busy and tired I allowed them to dictate the letter. This was the written evidence that they desired. This method is being

worked regularly. It is a dishonest underhanded frame-up to catch doctors who are honestly endeavoring to comply with the law.

That is one case. In another case in Boston there were two physicians in the same office, and both were allowed to compromise by the payment of \$10 each, on the ground they had not kept records of the circumstances and times under which they had made solutions of cocaine crystals. They would buy the crystals in quantity and make up the solutions as they needed them. Under the regulation they are required to keep a record of each individual person to whom they administer or dispense narcotics or to keep a record when they make up the solution. The narcotic agents came in and found that they had not kept a record of the time when they dissolved the crystals. They were allowed to settle by the payment of \$10 each. Trivial annoyances such as these are one of the reasons physicians do not want to keep any more records than are absolutely necessary.

When you come to the matter of supervision by druggists, that is, requiring druggists to pass judgment on each narcotic prescription, I think the situation is simply impossible. The ordinary elementary rule of criminal law is that the law must give a man notice of what he may do and what he may not do. Here is a proposition that a druggist must refuse to fill a prescription, if circumstances are such that from them he might reasonably deduce that the prescription was not issued in the ordinary course of professional practice. It is not necessary that he shall deduce, but if the court finds that he might have deduced, might have reasonably deduced, he has no right to fill the prescription.

MR. HADLEY—But he is to that extent put upon notice or upon inquiry.

DOCTOR WOODWARD—Yes, sir.

MR. HADLEY—And he must determine what the fact is in a reasonable way.

DOCTOR WOODWARD—But this is a criminal statute.

MR. HADLEY—I understand.

DOCTOR WOODWARD—And he has no standard, either as to what constitutes the ordinary course of professional practice, or what constitutes circumstances from which he might reasonably deduce these facts. The Supreme Court and all the courts have never yet been able to say what is the ordinary course of professional practice. This Linder case I spoke of is practically a modification of previous decisions made by the Supreme Court.

MR. DICKINSON—Would you be disposed to leave the law as it is, or would you have suggestions to make or amendments in view of the proposed amendments here?

DOCTOR WOODWARD—I think it is very untimely and unwise to attempt to do anything with the law. I think the more you attempt to do with the law at the present moment, the more likely it is that someone will test it out from a constitutional standpoint. And if that is done, the more rigid the law is, the more it interferes with state regulation, the more apt it will be to be declared unconstitutional.

MR. DICKINSON—What was the name of the Chief Justice who wrote the dissenting opinion you referred to?

DOCTOR WOODWARD—That was Chief Justice White.

MR. HADLEY—What is your general observation as to the operation of the present narcotic law? Are we making fairly good progress or not in the curtailment of the narcotic habit?

DOCTOR WOODWARD—We do not know. I have some figures here. One of the most conservative recent statements is to the effect that we have but 110,000 narcotic addicts. I think that is a conservative estimate. Of course, others have estimated it as high as a million. I think that is quite certainly excessive.

But you are not reaching the question by this proposed legislation. Here is a statement that was issued from the office of the narcotic information bureau, Federal Prohibition Unit, in Washington in 1924:

The smuggling of narcotic drugs constitutes the greatest problem with which the narcotic division has to deal. It is estimated that 90 per cent and perhaps more of the drugs supplied to these addicts is procured through unauthorized channels, dope peddlers, bootleggers, and smugglers.

Do what you will, you are not going to reach that situation by this bill.

MR. HADLEY—Our last legislative effort was along the line of the narcotic control board. Has that worked to advantage?

DOCTOR WOODWARD—I think so. I think we may say very definitely that the operation of the several narcotic control laws has been of advantage. Just how far the Harrison Narcotic Act itself has operated to advantage, I do not know. If I were asked for any suggestion as to procedure, I should say that where we have failed in our duty is in failing to stimulate states to enact effective narcotic laws and to enforce them, because under the Opium Convention of 1912 we assume that duty quite as much as the duty of enacting federal legislation. Article 10 of the convention of 1912 provides:

The contracting parties shall use their best efforts to control or cause to be controlled all those who manufacture, import, sell, distribute, or export morphine or cocaine or their respective salts, as well as the buildings where such persons exercise this industry or commerce.

MR. HADLEY—It was with a view of meeting that obligation that Congress proceeded to enact this law.

DOCTOR WOODWARD—Yes. It seems to me that a more active co-operative campaign is desirable, particularly in view of the jeopardy in which the Harrison Narcotic Act is now placed. Physicians co-operated with pharmacists and others framing a model state narcotic law. We did not get as far along as we desired. At the present time I am now actively co-operating with the committee on narcotic drug legislation of the Conference of Commissioners on Uniform State Laws. They have submitted two reports at the last two annual meetings, and we are hoping to get a law before long that has the approval of the best legal minds in the country.

MR. HADLEY—I understand your position is that under the status of existing federal legislation it is better and wiser to co-operate with the states for supplemental legislation by the respective states on this subject.

DOCTOR WOODWARD—Yes, sir. That is my judgment with respect to the entire subject-matter of this bill.

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**Sporadic Meningococcus Meningitis**—Prior to the introduction of serum therapy for sporadic meningococcus meningitis, the mortality of the disease in the first year of life approached 100 per cent. In infants under 1 year of age treated by Stafford McLean and John P. Caffey, New York (Journal A. M. A.), with serum, recovery occurred in approximately 50 per cent. In children between the ages of 1 and 5 years, 85 per cent recovered. The later growth and development of these children with apparent complete recovery from their acute infection is of interest and of considerable importance. The authors have observed forty-four such cases (excepting two patients who died in the first year after discharge from the hospital) over a period varying from one to ten years, and these form the basis of their report. In ninety-seven patients with meningococcus meningitis treated with serum at the Babies' Hospital in the ten-year period from 1916 to 1926, recovery occurred in fifty-nine, or 61 per cent. These cases were all of the sporadic type. The diagnosis in forty cases was proved by finding meningococci in the cerebrospinal fluid. In the remaining four, the diagnosis was made because of the purulent character of the fluid in which no organisms of any variety could be found. The serum used was polyvalent. It was made in the laboratories of the New York State Department of Health, of the Health Department of New York City, or of the Rockefeller Institute. The patients varied in age from 35 days to 4½ years. Follow-up examinations have been made in forty-four of the fifty-nine cases. Twenty-five of these patients have been observed for three years or longer, and in this group fifteen have been under observation from five to ten years after treatment. In the total number of cases followed, thirty, or 69 per cent, presented no abnormalities throughout the period of observation. Nine, or 20 per cent, showed serious sequelae, and death occurred in five, or 11 per cent. Four were cases of deaf-mutism, two of hydrocephalus, two of impaired vision, and one of mental deficiency. The time of occurrence of sequelae suggests the value of early treatment in their prevention.



# EDITORIALS

## LOS ANGELES AND SMALLPOX

In our July issue we said:

"'The Public School Protective League'—This is from the letterhead of an organization that solicits funds for the purpose of opposing vaccination and other scientific medical policies. They designate vaccination in Los Angeles as 'A Modern Inquisition.'"

Under date of June 29 we have a protest reading in part:

"The Public School Protective League does not solicit funds for the purpose of opposing vaccination or any other scientific medical policy. It functions for the purpose of protecting public schools of the state against the encroachment of enforced physical examinations and vaccination. Its work is to advise parents concerning the laws of the state pertaining to such matters. The League has

no quarrel with any individual or organization desiring vaccination, neither does it attempt at any time to interfere with the physical examination of school children whose parents desire them to have such supervision at public expense.

"The Public School Protective League has at no time designated vaccination in Los Angeles 'A Modern Inquisition.' It did reprint and send out to its membership an article which appeared in The Christian Science Monitor and which was entitled 'A Modern Inquisition.' A copy of this article is enclosed herewith. You will note that the article had to do with the 'Inquisition' methods used by the Health Board in the city of Milwaukee during a so-called epidemic, coercing the public into submitting to vaccination."

The copy of leaflet enclosed follows. It needs no comment:

REYNOLD E. BLIGHT, Los Angeles  
President

DR. HARRY W. FORBES, Los Angeles  
Vice-President

MRS. CHAS. H. GODFREY, San Francisco  
Vice-President

EDMUND J. CALLAWAY, Long Beach  
Director

MISS MARY S. WILLIAMS, Pasadena  
Director

DOUGLAS L. EDMONDS  
MARSHALL STIMSON  
General Counsel

DR. MAE PARSONS, Los Angeles  
Director

MISS RUTH STERRY, Los Angeles  
Director

MRS. HELEN L. PALMER, Los Angeles  
Secretary-Treasurer

MRS. L. P. BOYCE, San Francisco  
Secretary-Treasurer  
for Northern California

## The Public School Protective League

AN ORGANIZATION HAVING FOR ITS PURPOSE THE PROTECTION OF THE  
PUBLIC SCHOOLS FROM MEDICAL AND ECCLESIASTICAL EXPLOITATION

The Function of the Public School  
Is to Educate—Not to Medicate

714 UNION BANK BUILDING  
325 W. Eighth Street  
Telephone VAndike 9727

It is the School that is  
Public—Not the Child

### A Modern Inquisition

There is a striking similarity between the mode of procedure in the present smallpox situation in Los Angeles and that pursued in Wisconsin during a smallpox experience in that state.

The international newspaper, The Christian Science Monitor, under date of February 18, 1926, published a very strong editorial based on the Milwaukee affair, which the League feels is of special value at this time as bearing on the California problem. The Monitor article is here reprinted in full:

#### A MODERN INQUISITION

Frankness is to be commended as a general thing, but there are not many health officers who dare to be as frank regarding their use of 'fright and pressure' as agencies for promoting the use of their wares as was Dr. John P. Koehler, Commissioner of Health, in Milwaukee, Wisconsin, in an article in the Wisconsin Medical Journal for November, 1925. The article was a discussion of the alleged smallpox epidemic in Milwaukee, and started with the premise that the biggest job of a health department has always been, and always will be, to 'persuade' the 'unprotected' people to be vaccinated—a premise which he explained, or rather, amplified, by stating, 'This we attempted to do in three ways: first, by education; second, by fright; and third, by pressure.'

In expanding his subject, moreover, Doctor Koeh-

ler can never be accused of beating around the bush. 'During the months of March and April we tried education,' he wrote, 'and vaccinated only 62,000. During May we made use of fright and pressure, and vaccinated 223,000 people.' But he was still not content, apparently, with the result, for he unhesitatingly declares that there were still too many who could neither be educated nor frightened into vaccination. Hence he felt 'justified in using all of the power a health officer has, and if that was not enough, to get more.' And working from this standpoint, he quite naturally reasoned that, if fear will not accomplish so desirable an achievement as wholesale vaccination, why, then, put on the rack the people who dare to assert their right to individual determination in the matter of their own health measures, and stop their nonsensical opposition. For that is what the means next employed virtually amounted to.

Listen. 'We sent out a third letter to all employers requesting them to have all of their employees vaccinated and at the same time informing them that if a smallpox case developed in their place of employment in the future we would consider their place of business a menace to the health of the community and very likely place the entire establishment under quarantine until it could be cleaned up and made safe for the public. The results of the means employed were stated succinctly,

and doubtless with complete satisfaction to the health commissioner, in these two sentences:

'Putting the responsibility on the employer drove in thousands of antivaccinationists who could better afford to get vaccinated than lose their jobs. All employers co-operated very bravely with this last request, although in a few instances it was necessary to lay off old, reliable, and valuable employees.'

The tragedy of this situation is the more palpable when it is remembered that, even according to recent medical teachings, the effect of fright and such 'pressure' as above described is to produce a mental state by no means highly resistant of such conditions as the health officer was presumably working to overcome. Hence statistics as to the alleged results of his endeavors carry not the least real weight, because any improvement noted must have come about not because of, but despite, the measures employed. And when the significance of the fact is appreciated that without doubt the utilization of means such as those to which Doctor Koehler resorted was actually responsible for a great amount of sickness which followed them and which it was attempted so vigorously to combat, it is seen that the whole issue is one of far more vital importance than might appear on the surface.

It is needless, therefore, to point a moral in so obvious a case of extortion by terrorism. The people of the United States have a right to freedom of choice in healing as in religion. Hence those who attempt to usurp power to force an issue in the opposite direction are running counter to the stream of present-day progress, with consequences which need only be awaited for a short time to become manifest to public view.

(Reprinted from The Christian Science Monitor, February 18, 1926.)

We are glad to give publicity to the statement of the "League" that it *"does not solicit funds for the purpose of opposing vaccination or any other scientific medical policy,"* and we are pleased to have the assurance that *"the Public School Protective League has at no time designated vaccination in Los Angeles 'A Modern Inquisition.'"* They only reproduced and circulated under their own letterhead an article from The Christian Science Monitor.

Also we are glad to quote the League's statement that "we must emphasize that at no time has the League fostered any movement to prevent the vaccination of anyone who really believed that it would be a protection against smallpox."

A great many doctors agree with the implication that free adults who are opposed to the certain protection that successful vaccination affords, should be allowed to have their smallpox if they want it. Few, however, are willing to extend such "self-determination" to children, "shut-ins" and other incapables, nor are they willing to see people commit suicide by such a filthy method without making every possible effort to make the facts available to them. Of course the public health authorities have precisely as much authority in the control of smallpox as they have over other contagious and infectious diseases and that authority is still ample in California.

## RIGHT OF CHOICE ON VACCINATION SHOWN BY JUDGE

D. L. Edmonds Answers Stand Taken by University of California President

Under these headlines The Christian Science Monitor, April 27, 1926, says:

Declaring in substance that vaccination has been foisted

upon the public through false representation and because of the financial gain which it brings medical practitioners, Judge Douglas L. Edmonds of the Los Angeles Municipal Court has stated the position of the Public School Protective League and other organizations and individuals who are opposing vaccination in California.

Judge Edmonds' statement in opposition to present methods of promoting wholesale vaccination in southern California is in response to a letter from Dr. W. W. Campbell, president of the University of California, in which Doctor Campbell expresses the hope that the Public School Protective League will not attempt to obstruct the campaign for vaccination, claiming that the efficacy of the practice has been amply shown.

After making it plain that opponents of vaccination oppose not the practice but the fact that health authorities are attempting to make it a compulsory measure, Judge Edmonds' letter declares:

'I fail to see the reason why the advocates of vaccination should so continually and persistently demand compulsion on its behalf. If vaccination protects, as those who believe in it claim, there is no possible reason why they should endeavor to compel others to submit to it. Certainly not for their own protection, because if they are vaccinated, they are protected.'

### EXAGGERATION ALLEGED

I know that the reports of the health department show a large number of cases of smallpox in Los Angeles for the past few months. I know also, and I say this advisedly and dispassionately, that only a very few of these cases are actually smallpox. I believe that publicity was given to this alleged epidemic for the particular purpose of driving a large number of citizens to seek vaccination through compulsion, direct or indirect. I know that vaccination is today a huge commercial proposition and is manipulated as such.

If you do not believe these statements, let me say to you that I have not talked to a single physician, either health officer or private practitioner, who has not admitted to me as man to man that the Los Angeles situation has been grossly exaggerated. Each one of these persons tells me that the great majority of reported cases of smallpox are not smallpox at all and that health authorities have demanded that the medical profession include as smallpox every case even remotely having its symptoms.

If you say that this is impossible, let me remind you that at the time of the influenza situation a few years ago, health authorities demanded the reporting as influenza of even slight colds and that the then State Board of Health acknowledged the figures as grossly exaggerated.

I do not charge that every medical man or advocate of vaccination is deliberately promoting vaccination to his commercial advantage. But I do charge that the profits from the sale of vaccine and its administration are enormous, and that a small coterie of political doctors are manipulating the market for their wares.

### MONETARY RETURN LARGE

When one physician in Los Angeles tells me that he made \$4000 from vaccination in February and the city and county had each bought thousands upon thousands of dollars' worth of vaccine, it is not difficult to see that the advocacy of vaccination may not be as disinterested as many suppose.

In conclusion may I say that I do not see why the smallpox situation should give you the official concern you mention? It would seem to me that your entire official responsibility ends when you make it possible for those who desire vaccination to receive it. When you compel vaccination you seriously encroach upon the rights of every citizen by setting up your own estimate of proper medical treatment as one which the individual must follow irrespective of his idea on the subject.

Let me cite one result of this: The beautiful, attractive daughter of Los Angeles parents of prominence was refused admission to your southern branch without vaccination. She and her parents finally, after much parleying with your officers here, consented to it with much reluctance. Within a week this lovely girl was dead.



There is no question but that vaccination was the cause of death. I should think this case and the serious results which have occurred in other cases of vaccination of students would give you more serious official concern.'

Under date of May 28, Dr. George Parrish, Health Officer of Los Angeles City, in an official and open reply to Municipal Judge Edmonds, says:

"Your attack upon vaccination is evidently predicated upon prejudice and ignorance. The statements contained in your letter are based neither upon fact nor adequate investigation, but are 'seemingly' the result of venom and uncontrolled emotions. Lest the public be misled and impressed by your outburst, I challenge you to give to the public or to myself the name of any reputable physician, either with the Health Department or in private practice, who told you that many of the reported cases of smallpox were not that disease, but that the medical profession included as smallpox any case 'remotely having its symptoms.' I also challenge you to give to the public or to me the name of the Los Angeles physician who made \$4000 from vaccinations in February.

"You say, quoting your own words, 'I know that the reports of the Health Department show a large number of cases of smallpox in Los Angeles for the past few months. I know also, and I say this advisedly and dispassionately, that only a very few of these cases are actually smallpox.' This statement is a deliberate and vicious falsehood. Every single case that this department quarantined was inspected and was smallpox. The records are open to all. Why did you not avail yourself of them?

"Because of your lack of knowledge of smallpox and vaccination you fail to see the reason why the advocates of vaccination urge it on the public. May I enlighten you? There are many persons who, when they know the truth, wish vaccination. It is this class of people that the public health service is trying to reach. I have no fight with the Christian Scientists nor am I interested in whether they vaccinate or not. That is their business; but, as stated above, it is those people who are in quest of the truth and who are misled by false propaganda that the Health Department is attempting to help. Another very good reason why the public should vaccinate is, that the recent smallpox outbreak cost the taxpayers approximately \$600,000. Ninety per cent of the city's cases were those people who listened to such as you and declined to vaccinate. One hundred and sixty-five of those poor deluded persons are now dead.

"As to the commercial side of the problem, the Health Department vaccinated over 350,000 persons without making one cent of profit. Doctors in private practice have to live, and as a rule are just as honest as judges, lawyers, and other professional men. It is but right that they should charge for vaccination when persons come to them.

"You closed your article by citing one result of vaccination. The records of the Health Department fail to show a death permit which will cover the case you have mentioned. Will you please give me the name and address of the attractive young lady who died from vaccination?

"Keeping the above information from the public is to suppress evidence that the bar of public justice demands. You are, no doubt, familiar with the legal maxim that evidence willfully suppressed cannot be construed as creditable. If suppressed, would not the public be justified in assuming that your statements are false?"

These are some reasons why the fair name of the fair city of Los Angeles has been and is being injured by the inexcusable prevalence of smallpox.

Isn't it amazing that an officer of the courts, an administrator of justice, would charge physicians with mercenary motives in urging vaccination, and that an element of the public press—a Christian element at that—would give its space over to such strabismic appeals to ignorance and prejudice, so easily shown to be false? It requires no unusual intelligence to compare the fee, from \$0.00 to \$3.00, a physician gets for vaccinating a person and the fee

for weeks of trying day and night service to the unvaccinated smallpox patient.

Judge Edmonds, who probably feels concern over crime waves and criminals, seems disturbed that a fellow government officer should be "officially concerned" in also meeting his obligation to the people of the city and who, like the judge, bases his action on evidence.

Much of this evidence is recorded on the tombstones of children and other citizens, in the bleeding hearts of bereaved parents, and the sympathies and prayers of Christian people everywhere.

### A PROMISING HEALTH SERVICE

"Dear Mr. —," writes Doctor — to one of his patients, "I want to call your attention to the unusual prevalence of smallpox in California at the present time and to urge you to be sure that Mrs. —, the children, yourself, and your employees, are adequately protected by vaccination. Vaccination is a simple procedure, entirely harmless when properly done, and a certain protection against one of our most serious and contagious diseases.

"I am sending this letter to all patients whose names appear on my records. If you still consider me your health counselor, I would like to examine each member of your family as to his or her present protection and to vaccinate those who need it.

"If, since I last served your family, you for any reason have availed yourself of your privilege to change doctors, please show this letter to your present physician who no doubt will endorse my plea and render the needed service."

A member submits this proposed letter and wants to know whether or not it would be ethical. In our opinion it is ethical, highly commendable, and contains the germ of a much needed and valuable service which is now, in effect, in operation by many specialists in children's diseases and is susceptible of extension in many directions to the advantage of the public health and to the confusion of much current propaganda. Always with the addition of the last paragraph of the above letter, and possibly scrutiny by a committee on letters on different subjects, there are opportunities for far-reaching and valuable health service which every doctor may render.

In "Periodic Health Examinations," for example, it would be easy to prepare a letter which, if sent out by all doctors to patients whose names are on their records, would do more to establish this excellent service than all the propaganda so widely distributed through the usual channels.

It is certain that some individuals would receive letters from more than one doctor, but with the saving paragraph at the end of the letter, the effect upon the person addressed would be all the stronger, and possibly the thought that one doctor was trying to "steal" another doctor's patients would be eliminated.

Discussion of the question, in letters for publication in the "Readers Forum," or personally to the Editor, is invited.

### THE CALIFORNIA BOARD OF MEDICAL EXAMINERS

California physicians do not all realize how fortunate we are in having a Board of Medical Examiners made up entirely of members of the C. M. A.

This board has great powers in licensing, regu-

lating, and disciplining when necessary. Their duties in all these respects are constantly increasing in volume and difficulties, which are being discharged with a thoroughness, fairness and efficiency that reflect credit upon the members of the board, upon the profession they represent.

We came near, not long since, having these professional duties and responsibilities assigned to a layman, and in some states such depressing conditions—or others even less effective in safeguarding the health of the people—do obtain.

The California law, or rather the several laws purporting to govern the licensing, discipline, and revocation of licenses of doctors, near-doctors and others who are permitted by the state to practice scientific medicine or any one of several forms of legalized fakery, are admittedly bad. This increases the difficulties and adds enormously to the responsibilities of the Board of Medical Examiners, even in the problem of granting licenses, and it makes the problem of discipline and revocation of licenses amazingly intricate and difficult. In this respect the board is a court—and a busy one—requiring frequent and prolonged sessions of several days each to transact the necessary and growing business.

At its recent session of a full week of all-day meetings, the board had before it some thirty-odd licentiates asking for further consideration of sentences already in force, and some fifteen new licentiates charged with violations of the Medical Practice Act.

The charges of law violation included almost every wrong that a doctor could do to discredit his profession and injure the health of his patients—criminal abortions, illegal operations, using medicine by drugless practitioners, operating “medical colleges” illegally, violation of narcotic law, faked credentials, illegal advertising, pimping for fakers, etc.

A morning spent in this crowded court with a crowded docket was illuminating to this editor. In addition to the accused, there were attorneys, operatives, witnesses, press representatives, and scores of curious or interested spectators of many kinds.

The editor left the meeting with the feeling that more physicians should be familiar with the work of the board, and with the conviction that doctors who violate law and ethics are more afraid of losing their license than they are of any other punishment; that all legal safeguards against issuing licenses to practice medicine are being enforced; that criminals, fakers and undesirables who do have licenses are being as fairly and effectively eliminated as is possible under our defective law; that all these and many other useful services are being rendered by a legal board of our members with a balanced sense of justice and a sympathy for misguided first offenders among doctors that deserves the unstinted commendation of decent doctors and the public—services that could not be rendered by any but a body of informed physicians familiar with the requirements and ethics of scientific medicine, with the provisions of law, and endowed with a sense of justice and sympathy, where sympathy is needed and may be extended without endangering the public health.

## COCAINE CHEMISTRY AND NEW LOCAL ANESTHETICS

The main object in the development of the newer local anesthetics has been to reduce the toxicity, and preserve, or improve on, the anesthetic efficiency, of cocaine. The relative lack of success in achieving this ideal is attested to by the survival of few substitutes, of which the principal one is undoubtedly procaine, and next, possibly, butyn. While the remaining substitutes—and they are legion—may possess some small merit in a particular direction, they cannot seriously compete with the established position of those just mentioned. However, this field is always highly cultivated, and it would be rash indeed to deprecate the efforts, and to deny the possibility of achieving success, along new and untried lines.

For nearly thirty years the German chemist, R. Willstätter, and his school have patiently investigated the chemistry of cocaine, which, it may now be said, is fairly well understood. These investigators have prepared a series of optical isomers of cocaine, among which the dextro-pseudo-cocaine (d- $\Psi$ -cocaine) in the form of tartrate appears to possess certain desirable anesthetic qualities. It should be stated that two series of 6 isomers have been isolated and prepared by Willstätter—i. e., the normal (natural) series consisting of d-cocaine, l-cocaine (appears in coca leaves) and d-l-cocaine (racemic), and the pseudo series consisting of d- $\Psi$ -cocaine, l- $\Psi$ -cocaine and d-l- $\Psi$ -cocaine. The d- $\Psi$ -cocaine occurs as a by-product in the synthesis of cocaine; the other members of the pseudo series being prepared synthetically. The pseudo differs from the normal series in the rearrangement of certain groups in the cocaine molecule. The salts of the pseudo series are less soluble and penetrate tissues less readily than those of the normal series, but they dilate the blood vessels and, therefore, tend to be absorbed more rapidly than the normal isomers. Commercially, the d- $\Psi$ -cocaine is known as “psicain” (Merck).

Although psicain has been previously investigated and claims of superiority over cocaine have been made, the latter have not been free from contradiction and exaggeration. Recently, the product has been reinvestigated carefully by Björkman,\* Wiberg and Santesson of the Pharmacologic Department of the Medico-Chirurgical Institute at Stockholm. Santesson and associates compared the activity of different solutions of psicain and cocaine on taste, the pupil and motor nerve conduction. They found that acid psicain solutions up to 10 per cent strength were practically ineffective on the tongue, but that neutral solutions gave more marked and pronounced anesthesia than equivalent concentrations of cocaine. The anesthetic efficiency for the different tastes was as follows: most marked, acid, and next in order salt, sweet and bitter. The tactile sense on the tongue was also more readily abolished by psicain. Psicain in 1.4 per cent solution did not affect the human pupil, while cocaine in 0.25 per cent caused a marked dilation. Tropa-cocaine, stovaine, alypin,

\* Björkman, Wiberg and Santesson: Skand. Arch. f. Physiol., 1926, 47:145, “Vergleichende Versuche über die Wirkung von Kokain und d- $\Psi$ -Kokain (Psikain). Gray: J. Chem. Soc., 1925, 127:1150, “Aromatic Esters of Acylecgonines.”



eucaïne, procaine and holocaine had no effect on the size of the pupil, accommodation and intraocular pressure. From these results it is suggested that the well-known pupillary and eye effects of cocaine are concerned with peculiarities of its chemical structure. In practically equivalent concentrations (2.6 per cent), neutral and basic solutions of psicain were found more efficient than cocaine for conduction anesthesia of the frog's sciatic nerve. Acid solutions of psicain tartrate possessed no greater activity than the solution of tartaric acid. This difference illustrates nicely the greater permeability efficiency of basic alkaloids than of their salts, a principle made use of frequently by surgeons in securing better and more complete anesthesia. The better permeability of the anesthetic bases is due probably to their lipoid solubility in nerve structures. From their work Santesson and associates conclude that the neutral psicain possesses the following advantages over cocaine: lower toxicity and greater anesthetic efficiency, so that lower concentrations suffice and the anesthesia is more prolonged.

Certain anesthetic derivatives of d- $\Psi$ -ecgonine have been recently investigated by Gray of the Wellcome Research Laboratories in London. Their salts show the comparatively sparing solubility in water which characterizes the d- $\Psi$ -ecgonine derivatives in general. Preliminary results show that all the new esters, with three exceptions, are more active anesthetics than cocaine, as tested on the rabbit's cornea. The minimum effective concentration of the best of these, benzylbenzoyl-d- $\Psi$ -ecgonine, is  $\frac{1}{4}$  that of cocaine. The effective concentrations of this anesthetic are from 0.025 to 0.05 per cent for the cornea and from 0.005 to 0.01 per cent subcutaneously; the average lethal dose is 39 mgm. per kilo in mice. Five are better anesthetics than cocaine as tested by subcutaneous injection; of these the best, B-phenylethylbenzoyl-d- $\Psi$ -ecgonine and  $\Psi$ -phenylethylbenzoyl-l-ecgonine, are active in  $\frac{1}{8}$  the concentration required by cocaine. The toxicity of the substances just mentioned, as determined by intravenous injection into mice, is considerably less than that of cocaine in the case of the first, and only slightly greater than that of cocaine in the second and third. Apart from these, a rough parallelism, it is claimed, is observable between the degree of anesthetic action and toxicity. Thus, it seems that chemical investigations are continually bringing out new and unsuspected qualities in local anesthetics, though it may be doubted if man's ingenuity has as yet matched nature's secret skill.

#### "THE HIGH COST OF BEING BORN"

Doctors, hospitals, and nurses are under rather vigorous attack from numerous sources in many places for their alleged responsibilities for what the slogan makers call the "high cost of being born."

This wave of criticism has at last been taken up in California, and newspaper reports based upon what should be reliable sources of information claim that whereas "in grandma's day one could enter the world for less than \$100, it now costs an average of \$541.95 to be born, exclusive of nursing service and complications." The investigators appear shocked that it should cost from \$1000 to \$5000 to get some millionaire babies properly transposed from

their intrauterine parasitic existence to their extra-abdominal parasitic lives.

Analysis of these costs and luxuries was not furnished, or failed to interest editors. We are not informed that the costs of production are included in the costs of delivery. Nor are we told of the costs of production machinery running wild with its wastage along the road between production and delivery. Figures as to the costs of babies that do not include an analysis of these items are worse than useless to economists and the public, but they are easily interpreted as a criticism of those who serve, and that is the apparent purpose of many such reports.

Some grandmas may have been able to bring their babies into the world for less than \$100, or even without any cash outlay at all, but plenty of other grandmas were proud of the fact that they paid the equivalent of five thousand, ten thousand, and more for their children.

"Surveyors" often lose their sense of proportion when they begin to set aside certain angles of grandma's conduct, intelligence, and beliefs, and particularly when they are comparing the costs of grandma's babies with the costs of granddaughter's babies. Grandma could buy a pair of shoes for \$1, make her own candles from home-rendered tallow, cook and heat her house with wood cut by grandfather from trees in the yard. A neighbor woman assisted the doctor, whose only preparation for the event was to roll up his sleeves, wash his hands (maybe), and proceed to assist nature. Layettes were made by the mother and were woven with dreams, sewed by love, blessed with faith and hope, and sterilized by kisses.

Today there is no prospective mother in California who may not have all essential services connected with motherhood within costs she is able to pay, from nothing up. To be sure she may go as far as she likes in luxuries, and many elect outstanding luxuries for precisely the same fundamental reason that influences her to have a \$15,000 automobile with exclusive furnishings. The average doctor's fee for maternity service including prenatal and postnatal care is under \$50 in California, and if the large cities are excluded, it averages from \$20 to \$35.

There are numerous hospitals where those with crimped finances may have a flat rate of from \$50 to \$75 for everything, including the doctor's services, which are donated in such instances. Then, of course, there are the forty-odd tax-supported hospitals where the poor may go and have all service free of cost to themselves.

Finally, grandmother's doctor spent from six months to a year of his time and from \$100 to \$300 for his education and \$25 for his equipment. Granddaughter's doctor spends eight years above high school in hard study; he or some one spends \$20,000 for his education, and a decent equipment costs at least \$15,000 more. "Economists" should grasp and investigate more facts before they sling together the stories of a few individuals and issue them as facts arrived at by "research."

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The American Board of Otolaryngology will hold an examination in Denver, Colorado, at the University Hospital on Monday, September 13, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

**A Beloved Physician Passes**—Dr. James H. Parkinson died at his cottage in his beloved Sierra Nevada Mountains, Thursday, July 22, at noon, of carcinoma of the prostate. Funeral services were held at the Episcopal Church, Sacramento, Saturday, July 24. Interment private.

More fitting tribute to this widely known Californian and medical leader will be published in the September issue of CALIFORNIA AND WESTERN MEDICINE.

**The Abundant Life, Benjamin Ide Wheeler.** By Monroe E. Deutsch, University of California Press, 1926.

The author modestly calls this book "an illustrated record of a great constructive period in the University of California embodied in the best writings and public utterances of its president from 1899 to 1919." It is all of this and very much more. This book, through a judicious selection of President Wheeler's public utterances, affords the student and his friends an insight into the character, aims and accomplishments of one of the foremost scholars, leaders of men, lovers of youth and first citizens of the Golden West.

No man has had greater opportunities, and no man has accomplished more for Western (American) civilization, than Benjamin Ide Wheeler. No man is more beloved—and rightfully so—than he, and his name will stand pre-eminent in the history of California as posterity will read it.

I am neither a native son nor an alumnus of the University of California, but, in common with thousands of others, one of my cherished possessions is the friendship of this universally beloved man.

The University press have built a hook in keeping with its contents so ably edited by Professor Deutsch. What a joy is in store for the alumni in the reading of this book, the brief record of an "Abundant Life" still fruitful and helpful!

A well-to-do fellow hick recently discussed with me an interesting complaint about what he considered the outrageous fee of \$250 charged him by a city doctor for removing his appendix, plus a hospital bill of \$90.

A few careful questions elicited the information that his trouble had been of long standing and that his perfectly competent local surgeon had wanted to remove it, proposing a charge of \$100.

He motored to the city, accompanied by his wife and grown daughter, whose hotel bill for the ten days was \$265; three hundred odd dollars went for frocks, etc.; about \$60 went to beauty shops; over a hundred dollars for entertainment and pleasures; and a first payment was made on an expensive combination phonograph and radio set.

Yet this man's only complaint was about the fees of the doctor and hospital. He did not object to a hotel cost of some \$13 a day each for healthy members of his family, but he did object to paying \$9 a day for the far more difficult care of himself by the hospital, and he objected to a surgeon's fee which, considering consequent visits, was not much in excess of his family's "heavy doctor," when compared on a basis of hours of service.

When these facts and comparisons were called to his attention, he admitted their fairness and exposed the inner workings of his mind by a tirade against "bobbed hair."

"Every man," said Oliver Wendell Holmes, "is an omnibus in which all of his ancestors are seated."

No wonder the machine sometimes breaks down or runs through safety stations.

**The Medical Society of the County of Kings** has received the approval of the State Medical Society of New York for its new constitutional revision permitting the enrollment as associate members of laymen. Only those who are interested in scientific work or in the activities of the society will be accepted under the new provision.—M. J. & R.

The Kings County Society are getting a worldwide reputation for leadership. They initiate one good thing after another and make them succeed. If all of the 3000 odd county societies in the U. S. would follow their lead in this last venture untold good would ensue.

There are millions of intelligent people who would consider it an honor to be associate members of live medical societies, to the betterment of doctors and the cause they serve. Co-operation in health matters would then flow in the right direction—toward capable medical leadership.

**The Lay Point of View**—A general practitioner is one who looks for the cause instead of blaming it on your teeth.—Los Angeles Times.

**Aaron Hardy Ulm** (Dearborn Independent, July 3, 1926), writing under the title, "Uncle Sam and the Baby Crop," gives a most telling, effective and withal truthful analysis of the operations of the Sheppard-Towner law.

Doctor Samuel is out-culting the cults in certain phases of the practice of medicine, and in consequence he must accept the rating that public opinion eventually gives to other doctors who presume to practice medicine without adequate preparation for such highly specialized work.

Every physician has received a Directory information card. It is important that this data be forwarded promptly to the A. M. A.

This information will be used in compiling the Tenth Edition of the American Medical Directory, now under revision in the Biographical Department of the Association. The Directory is one of the altruistic efforts of the Association and is published in the interest of the medical profession, which means ultimately in the interest of the public. It is a book of dependable data concerning the physicians and hospitals in the United States and Canada.

"Everything from a cell," enunciated the great Virchow. Yes, and there are more than 26,000,000,000 cells, each requiring its own peculiar fuel, doing its own particular work, preparing for its successor, and yet, in health, working in harmony with its fellows in the most crowded existence known.

In first-page stories now being syndicated, Henry Ford says his hospital co-operates with outside physicians. The outside doctor may escort his patient to the front door, introduce him to the inside doctor and back out! At that Ford has no monopoly on "co-operation."

**The Woodshed Method.** It is not popular, nor is it quite socially correct to mention "discipline" as applied to children. While we are still reading and listening to the mutterings of "savants" who are urging children to forgive their parents, for they know not what they do, and some of whom reflect even upon the commands of God as being out of date, a few brave souls are beginning to sound danger warnings.

One of these deserves commendation for his frank



statement that what is needed by the youngsters is "woodshed tactics."

Some of these days a wideawake, intelligent American community somewhere or other is going to try stopping crime by punishing the criminals.—Nashville American.

"Be it Resolved by the General Federation of Women's Clubs in convention assembled, that we urge the women of America not to imperil their health and that of future generations by reducing methods other than those advocated by reliable physicians."

Bully for the National Federation!

More power to the facile pen of Arthur J. Cramp, head of our A. M. A. Bureau of Investigation. His publicity in "Hygeia" and elsewhere has a telling effectiveness and he is after the fakirs of yesterday and today. Every doctor will get the worth of his subscription to "Hygeia" from Cramp's contributions alone.

Mary Dewhurst Blankenhorn ("Outlook," June 30) tells a story of "Britain's Superfluous Women" that contains a biologic and health message worth pondering.

What a world this would be if all editors put into practice the conception of their responsibilities as outlined by Frank O. Edgecombe, president of the National Editorial Association, during their recent session in California, when he states:

"To weigh the acts of men and judge the motives behind the acts, to consider private rights and public policies, distinguishing between the trivial and the important, between the claims of the unworthy and the unclaimed rights of the worthy, between the fallacies of the temperamental enthusiast and the vicious pronouncements of the demagogue on the one hand and the solid foundation of truth on the other; to look forward as well as backward and always upward, prudently always and as tranquilly as may be; these are the duties that hourly lie in the path of the conscientious editor."

The plan of the American Medical Association for medical relief in disaster, published in the A. M. A. Bulletin, June, 1926, deserves prompt consideration and action by state and county units of our great federation.

Actinotherapy and Allied Physical Therapy. By T. Howard Plank, M. D. (Manz Corporation, Chicago). This is an interesting book and most physicians, particularly those in unlimited practice who use or would like to employ physical therapy more extensively, may also find it useful. Certainly the subject is important enough, and progress is being made at such a rapid rate and literature is accumulating so fast that the physician who expects to do anything but read and study must rely upon occasional reviews for enlightenment. Doctor Plank has attempted to condense current information of use to the bedside physician in this book of some 450 pages.

"The Ethics of Business," by Edgar L. Heermance (Harper), is a book that every doctor and every other person who wants to be informed in order to be fair-minded should read.

It was not so long ago that newspapers and even more serious formers of public opinion apparently took pleasure in criticizing the code of ethics of physicians. Some still do.

Mr. Heermance shows that hundreds of trade associations, chambers of commerce, advertising clubs, business, fraternal and social organizations today point with pride to their ethical codes. In fact, it would be hard to find a group of interests from bootleggers to bricklayers, from criminals to chiropractors, from bakers to bankers, from miners to ministers, executives, teachers, clubs and what-not who are today without their codes of ethics.

The medical code is the original and oldest because

medicine is the oldest occupation of which we have record. Many of the ethical codes of purely business groups are fully as idealistic and splendid in their purposes as is the physicians' code. The chief trouble with all of them is that human nature is weak and fakirs still fake.

Nevertheless, Mr. Heermance encourages us in the belief that the spirit of ethics is growing among people in all walks of life and that these codes are helpful in our progress toward better things.

It is encouraging to see medical and hospital publicity rapidly focusing on the problem of adequate payments to hospitals for service to industrially or otherwise insured persons.

There is no question but that hospital service to persons insured under industrial accident laws is paid for largely at less than the cost of the service to the hospitals. This wrong is widely prevalent in California, as elsewhere, partly because of the notoriously incomplete accounting systems of many hospitals and because the facts have not been placed clearly enough nor actively enough before insurance carriers or the public.

Insurance carriers quite naturally buy service at what they can get it for, and in the absence of sufficient information, competition and established custom has induced many hospitals to accept this class of patients at a sacrifice.

Wider interest, co-ordinated action and the light shed on the situation by increasing information, warrants the prediction that the difficulty will be remedied; patients will receive more adequate care, and insurance carriers will find the added cost; if not out of present premium rates, these will be increased sufficiently to take the burden of supporting a useful business off the shoulders of voluntary charity.

**Scarlet Fever Following Nose and Throat Operations**—Of forty-eight cases classed as surgical scarlet fever at the Durand Hospital, from 1902 to 1926, Beatrice R. Lovett, Chicago (Journal A. M. A.), states that twenty followed operations, thirteen of which were on the nose and throat. Of these thirteen cases, seven were instances of scarlet fever following operations for cleft palate, two following resections of the nasal septum, and four following tonsillectomies. The intervals between operation and the first symptoms of the disease were: in two cases, two days; in six cases, three days; in two cases, four days; and in three, a few days. All patients had typical scarlet fever, and most of the cases were of the septic type. Complications were unusually numerous, including two instances of bilateral otitis media, two of unilateral otitis media, and two of sinus infections, making a total of six complicated cases in the series of thirteen. One patient, previously operated on for harelip and cleft palate, died following sloughing of the wounds, with profuse purulent discharge and double otitis media. Four nurses caring for this child caught the infection from him. In most of the cleft palate cases, there was sloughing of the tissues and imperfect closure of the defect, so that, although the wounds healed eventually, the operations were not very successful. The occurrence of scarlet fever in children following operations especially on the nose and throat suggests the wisdom of testing and immunizing the patients beforehand. This is particularly advisable preceding cleft palate operations, since most of the patients are at a susceptible age, and if scarlet fever develops, complications are frequent, and the results of the operation are poor.

The scientist appears most transcendent when he reaches a correct generalization by reasoning from instances which do not belong to the rule. Once a concept is suggested and formulated in the mind of the observer, the path which first guided may seem to be no longer of moment. The initial hypothesis then becomes a foolish incidental; it takes more than ordinary candor to admit the groundlessness of the first aberrant step. And the history of science is deficient in the details from which one might study the psychology of discovery.—Edward F. Adolph, Science, June 25, 1926.

## MEDICAL ECONOMICS AND PUBLIC HEALTH

Myrnie A. Gifford, Chairman Public Health and Anti-Narcotic Committee, San Francisco Federation of Women's Clubs, and in charge of venereal disease and narcotic control work of the City Board of Health, in a recent address before her club made these interesting statements:

"When the segregated district was closed in 1917 a big step toward the abolition of prostitution specially regarded as a legal or tolerated institution was made. But in the transition from the regulation of vice to nonregulation of vice we were not clear in our own minds what steps were to be taken to a just and scientific way of meeting the problem, and compromised with vice by applying the present hygiene law to women who are promiscuous in sexual relations, but not to men who are promiscuous in sexual relations, and we find that this is neither justice nor hygiene, but still a form of regulation and toleration of vice, and it does not work.

"Gonorrhea and syphilis cannot be controlled by controlling only a small number of promiscuous persons, nor do we attempt to control any other communicable diseases in such a manner. Much the most important factor in the cure of gonorrhea and syphilis is early treatment and any method of dealing with these diseases which is likely to lead those infected to conceal their condition and to delay treatment is a most dangerous experiment. The hurtful association of gonorrhea and syphilis with the police must be uprooted if people ill of these diseases are to seek treatment as readily as those ill of measles and mumps.

"To reckon prostitution a legal offense is an untenable position. It is fundamentally unjust and impractical because it only aims at the woman. That is sufficient to condemn it medically as well as legally.

"Whenever there are reasonable grounds for believing that any persons are suffering with a communicable disease the health officials have the authority to require that such persons be examined. And there are 'reasonable grounds' for believing that persons who are known to be promiscuous in sexual relations are probably infected with gonorrhea and syphilis. It is not necessary to arrest such persons in order to examine them and place them under treatment, if treatment is needed, any more than it is necessary to arrest persons suspected of being infected with measles, tuberculosis, or smallpox. *These diseases should be handled outside of the police courts, by persons fully trained and who understand the problem.*

"Women can abolish prostitution by securing the removal of the words 'prostitute' and 'prostitution' from the laws and refusing to recognize or tolerate a class of women as different from all other human beings. When this is done prostitution will lose its power as did witchcraft when people refused to recognize it. Although there will still be a certain amount of promiscuity as there is still superstition, we will be a freer and happier people."

Of course Doctor Gifford is right in her conclusions that gonorrhea and syphilis are medical rather than police problems, quite as much so as are tuberculosis and smallpox. *The police have never prevented a woman from becoming a prostitute, a man from philandering, nor have they ever salvaged a prospect nor cured a patient.*

It is no reflection on police officers to say that they cannot control the conduct of individuals; prevent sexual intercourse with its potential consequences of gonorrhea and syphilis; cure practically incurable diseases, nor hunt all who have these diseases and hold them while someone else treats them by force.

If the women's clubs can bring about a public opinion that will accept and treat potential and actual victims of syphilis and gonorrhea as they do the prospects and victims of other dangerous infections, they will have the plaudits of all people, in which police officers doubtless would join with hearty enthusiasm.

**Improving Service to the Deaf and Blind—**The C. M. A. Section on Diseases of the Eye, Ear, Nose, and Throat introduced a promising innovation at the 1926 session by devoting one meeting to a symposium by non-medical people engaged in this work.

R. S. French, Ph. D., Principal of the California School for the Blind, speaking on the subject, "What the Oculist May Do to Aid Blind Children Educationally," said:

"The most important service which oculists can render is that of aiding in the securing of early reports in the cases of children of defective vision. Adherence to the law requiring the reporting of cases of communicable diseases is not sufficient. Every instance of serious visual defect or potential blindness should be reported to the Department of Public Welfare or to the California School for the Blind. Up to the present time such reports have been so casual that hundreds of persons have been neglected through years when educational treatment might have been of inestimable value.

"Distinction should be made on the basis of degree of mentality as well as degree of vision. Roughly, three distinct sorts should be recognized: those of fair intelligence and relatively slight visual defect who should be in the conservation of vision classes maintained in the various city systems. Class two consists of those of serious visual defect who cannot profit by attendance upon the conservation of vision classes and who should be either in the state school or in classes maintained for the blind in the larger centers of population. In the third group should be placed all children, no matter what their degree of visual defect, who cannot be reasonably expected to profit by attendance upon school courses. Such children recognized as distinctly feeble-minded ought to be placed in institutions where they will be under custodial care. They have no place in schools with children of normal or nearly normal mentality.

"Oculists may render a very great service by fostering the establishment of conservation of vision classes. Such classes are definitely provided for by law in many cities, but local authorities, unless stirred to action, are likely to be remiss in the carrying out of the law. If, on examination of a child, the oculist finds such defect of vision warrants special treatment, the case should be definitely called to the attention of the Superintendent of Schools, with a recommendation as to essential treatment. When a number of such cases accumulate the community should supply class facilities, and school heads should secure the expert services of a teacher specially trained for such work. In smaller communities where conservation of vision classes cannot be maintained due to lack of numbers, children so afflicted visually should be sent to the state school.

"Oculists can aid the educational authorities by creating sentiment for and insisting upon strict modernity in the treatment of blind children or those with seriously defective vision. Stress of financial condition should not be allowed to serve as an excuse for denying the blind child some approach toward equalization of opportunity with children of normal vision. This can be secured only by a thoroughly modern plant equipped not only for excellent academic work, but for the teaching of everyday duties of the household, good physical habits, good manners, and those trades and occupations possible for the intelligent blind. The need of a proper receiving building in all state schools should be emphasized. The fairly helpless children just entering school should be segregated from those whose training is more advanced and they should be given treatment under conditions favorable to their rapid progress.

"Oculists can perhaps render their greatest service in helping create decently human conditions for the living and employment of the adult blind."

Coralie Kenfield, Teacher of Lip Reading, speaking on the subject "The Re-education of the Deafened Adult," said:

"It has been said that the deaf child fails to develop



a normal psychology. The deafened adult reaches the full psychological normal, but because of his deafness, suffers a perversion of mental faculties already developed. The problem in the one case is largely that of starting the arrested faculties toward full development. In the other, of restoring perverted faculties to a normal condition.

"The aims of the teacher of lip reading are many. She must consider the physical well-being of the pupil. Sight must be conserved, ears, nose and throat must be kept clean in the strict sense of the word by means of proper medical advice.

"The teacher must train the eyes of the pupil to be quick and accurate, for the sound movements of speech are some of them so rapid and so obscure as to be almost invisible.

"She must train the mind. If power of concentration, synthetic and intuitive ability be not present she must develop it. She must work for a mind that will respond instantly to impressions—for a mind that by its quickness and alertness can jump from thought to thought without a break in the understanding.

"She must change her pupil's attitude of mind toward deafness. She must appeal to the spiritual side of the pupil's nature. She must overcome in the pupil any tendency to rebellion, suspicion, antagonism, and sensitiveness.

"The teacher of lip reading is gratified when her pupil succeeds in reading the lips, but she is overjoyed when a normal mental and spiritual outlook has been re-established. This is her true compensation.

"Lip reading is not difficult to learn, but it is difficult to apply. This is due in many instances to conditions over which the lip reader has no control. There may be a poor light or bad habits of articulation, both of which will defeat him.

"Lip reading should begin in the home. It makes for a happy, comfortable home life on the part of every member of the family. In the home lip reading may develop almost to perfection, or it may not develop at all. It all depends upon the attitude of the family toward the student of lip reading. Here the question of legibility of mouth is negligible, familiarity through long association making the mouths in the family circle easy to read.

"Little by little the student of lip reading gains confidence and poise. A difficult situation that makes lip reading almost impossible is met calmly. The student is not overcome with mortification because he does not understand. He knows fully the reason of his failure. He is master of the situation, and is much less likely to flounder than is the speaker.

"One of the most vital problems of deafness, as concerning the deafened adult, is that of finding or retaining employment. Employers are known to ask if there is lip-reading ability on the part of the applicant, for such ability implies a wide-awake mental attitude, as against the apathetic attitude of the non-lip reading, deafened worker.

"In times past the deafened adult had small chances of social life. His was a lonely existence. How changed are conditions today. Leagues and clubs for the deafened have sprung up all over the country. They offer opportunities for education, recreation, and service."

Blanche Van Deveer, Special Teacher of Lip Reading, discussing "The Hard-of-Hearing Child in the San Francisco Public School," said:

"Physicians examined 5359 children in nine schools and found 334, or about 6 per cent, had some hearing impairment. Of this number 124, or about 2 per cent, had a marked impairment. These 124 were enrolled in lip-reading classes. Some of them who received treatment from specialists were restored to normal hearing and were, therefore, dismissed from the class. Others who brought objection from their parents were also excused. The following is quoted from the doctor's report: 'As to probable causes, we found about 60 per cent to be due to remediable conditions, such as adenoids, tonsils, nasal obstruction, and hardened wax. Of the graver causes, in the order

of their frequency, we found measles, influenza, scarlet fever, whooping cough, mumps, cerebrospinal meningitis, tuberculosis, heredity, dental condition, injury from swimming, and one rare condition, viz., completely shutting off of the external ear by congenital malformation.'

"There was no place in the school department where these children could be educated, so we had to make a place. The Board of Education established a special class for the hard-of-hearing, and there are at present twelve in the special class with an excellent teacher in charge who is trained and experienced in both the work for the deaf and the normal child. These children have been transformed by her teaching.

"The majority of these children, it is true, are in need of remedial treatment which is being neglected. A specialist in San Francisco gave his time gratis to examine them last fall when the class was organized, and recommended operations for most of them. Only one boy has been operated and his hearing is improved, though not nearly normal.

"At the present time lip-reading classes are held in fourteen other schools by the special teacher, and ninety-four children are enrolled. In nine schools sixty-seven children are receiving a lesson twice weekly; in four schools twenty-one children have a regular period four days a week for which they are given two units of credit for the term's work. In five schools the opportunity teachers give one lesson a week with the help of the special teacher.

"The Board of Health has recently appointed a specialist, and he has tested one junior high school of 1100 pupils. He found thirty-three cases to be hard of hearing and deaf. Six cases were recommended for lip-reading, but seven more whose audiometer tests showed a loss of 30 per cent were taken into the class. Ten schools have been tested in the past two years. At that rate it would take twenty-two years to have all of our schools tested.

"Establishing contact between the work of the school doctor and the public clinics or private doctors is the great problem. In one school forty-seven cases were referred to a specialist, and the school nurse only knew of two cases who reported for examinations."

Kate M. Foley, Home Teacher of the Blind, California Library, had as her subject "How Oculists Can Help with Sight-Saving Classes and Preparation for Oncoming Blindness":

"In California we are remiss in our duty to children with imperfect vision. In San Francisco there is but one sight-saving class, caring for about eighteen children; in Los Angeles there are four classes, caring for perhaps fifty children, and Long Beach has one small class. Many oculists do not know of these classes, and do the best they can to correct visual defects with glasses in order to keep the children in school. But in these days of large classes the grade teachers have no time to give the child who does not see well enough to read what is on the blackboard, or do the writing required, and such children are passed on from class to class, in order not to hurt the feelings of parents or discourage the children.

"A most important subject, and one too little discussed is the attitude of oculists toward patients suffering from eye diseases that, in all probability, will result in loss of vision. If, for some special reason, the oculist fears it would be unwise to tell his patient that blindness is imminent, he should at least urge him to conserve his remaining sight, and advise him to do as many things as possible by touch, and warn him of the consequence of eye strain. But, in most instances, it is kinder to prepare the patient for oncoming blindness, so that he may shape his life accordingly and, when possible, learn to read raised type and use the typewriter.

"When you have a patient facing inevitable blindness, get in touch with some agency for the blind, the school at Berkeley, the State Industrial Home in Oakland, or the home teachers of the blind employed

by the State Library at Sacramento. There are two of these teachers: Miss Catharine J. Morrison, with headquarters at 951 El Molino Street, Los Angeles, and Miss Kate M. Foley, with headquarters at 146 McAllister Street, San Francisco. The instruction in reading and typing is free, and books in raised type are sent by parcel post from the State Library at Sacramento, free through the mail. There is no age limit in learning to read with the fingers. If the mind is clear and alert, and the touch not impaired from some physical cause, there is no reason why even very elderly people cannot learn.

"John Newton says 'you can't shove the darkness out of a room, but you *can* shine it out.' I see this miracle performed every day, yet to me it is ever new, ever wonderful, stimulating me to greater efforts for my people, because the blind *are* my people, and their joy and sorrow, triumph or defeat, finds an echo in my heart. And so you do not wonder that I am here this afternoon, appealing to you in their behalf, asking you not to prolong a treatment which you know must end in disappointment and grief to your patient. It takes courage, I know, to tell such bad news to a man or woman, but how much more tragic it is to buoy up his hopes, only to have them dispelled by the darkness you can no longer avert. There are so many other ways, too, in which you can help. Co-operate with the National Committee for the Prevention of Blindness, seize every opportunity to lecture to mothers on the care of children's eyes, urge the establishment of sight-saving classes, advocate the proper lighting of schools and other public buildings, and never fail to win converts to a cause that is, I am sure, close to your hearts. I know you all lead very busy lives, but your profession places you in a position to do so much for humanity, and I feel sure you will all be glad to contribute your share to this great task. Then let us adopt prevention and conservation as household words; let us do our best in spreading the gospel of fewer blind babies, fewer children sitting on the side lines, and fewer men and women deprived of eyesight at the floodtide of life. This is one of my cherished dreams, and I know you will all help me to make that dream come true."

The chief things New York's new Medical Practice Act will accomplish according to "American Medicine" (May) are:

1. It will require every practitioner to register annually with the secretary of the State Board of Medical Examiners, thereby furnishing an official list or roster once a year of all duly licensed practitioners in the state. This list is to be used by all authorities as well as the public at large.

2. It will afford opportunity through a grievance committee for the profession to clean its own house.

This needs no explanation because there are unethical practices in the medical profession as well as in all other professions, and sometimes greed for money overshadows the desire for intelligent and faithful service.

3. It will provide for prosecutions of all violations of the law by the Attorney-General.

4. It will afford treatment of the sick and ailing by properly trained physiotherapists working under the direction of duly qualified physicians.

5. It will protect the public from the exploitations of quacks and charlatans by regulating the use of the title "doctor" and by the prevention of fraudulent and deceptive advertising.

The prestige of preventive medicine will be enhanced by cutting away the dead wood and teaching only the known facts. The things which today we think might be of value from a preventive standpoint may be discredited by the knowledge of tomorrow. Preventive medicine has made great advances, but for the sake of its own development the uncharted portions of the field should be kept early in mind.—Boston M. and S. J., April 22, 1926.

All reputable newspapers have purged their columns of nostrum advertising and are ready to print articles

relating to the prevention of disease and the promotion of health. Numerous men and women have developed the faculty of translating scientific research information into a vocabulary and style of interest to the average non-medical reader.

But newspaper items telling how to treat diseases do more harm than good. Physicians do not treat diseases; they treat persons who have diseases, and this cannot be done by mail or the printed word. There must be personal contact between the patient and his physician.—The Nation's Health, May 15, 1926.

The Humboldt Bank of San Francisco, whose advertisement hereafter will be found in CALIFORNIA AND WESTERN MEDICINE, offer an attractive combined savings, trust, and investment plan calculated to have a wide appeal. It is designed particularly for the benefit of busy business and professional men, and is in successful operation. The object of the Trust Investment Savings Plan, as it is called, is to enable one to create an independent investment fortune without the necessity of assuming the many responsibilities which are attendant upon the selection and ownership of securities. Under this plan any amount can be trebled in a period of less than six years.

In operation the plan works as follows: The investor deposits \$2500 in cash or securities of that value in a trust fund established for the purpose. Humboldt Bank then advances for deposit in the same trust fund any sum up to twice the amount deposited by the investor. The entire fund is then invested.

Under the assumed case the investor pays in \$50 each month, which is applied toward the reduction of the amount of the bank's advance. The income from the entire trust fund, after the payment of the interest due to the bank on its advance, is also used to reduce the principal of the bank's advance. By this means every dollar paid into the fund by the investor is kept working at the highest possible interest return and, in addition, all interest collected from the investments is likewise immediately put to work at the highest rate.

Assuming that you start with \$2500 and pay only \$50 a month, you will have accumulated \$7500 in less than six years' time under this plan. Any other amount may likewise be increased in the same proportion. Business and professional men have been enthusiastic over the Trust Investment Savings Plan because of its practicability. Professional men, particularly, frequently find it difficult to prudently invest their earnings, due to the fact that their professional duties take heavy toll of their time, leaving no opportunity for the careful study of problems of investment. Your securities receive the same careful attention that the bank gives to its own investments. One of the strong features of the plan is that the bank has no securities to sell and therefore is able to give you the benefit of an impartial and unbiased opinion on the merits of securities selected for investment.

Another important feature of the plan is the fact that the agreement may be so drawn that should the death of the investor occur while the agreement is still in force the trust fund will *not* have to be administered in the Probate Court. The fund is distributed directly by the bank to the ones named to receive it by the investor in the agreement. Thus, the expenses and delays of probate proceedings are entirely eliminated.

By providing a definite schedule of investment, by means of which a fortune of a certain size will be accumulated in a fixed period of time, the plan has enabled many investors to derive the greatest benefit from their savings.

In 1925 the Listerine concern spent \$2,100,000 in advertising, while its net profits for the same year were \$2,011,940. More than twenty years ago one of the best known "patent medicine" makers said to his fellow-members of the proprietary association: "The 20,000 newspapers of the United States make more money from advertising proprietary medicines than do the proprietors of the medicines themselves." Evidently they still do.

When John Doe pays a dollar for a bottle of "patent medicine" he little realizes that more than 50 cents of his



dollar has been expended in an effort to persuade him that the nostrum is what he needs.—Hygeia.

**The Twenty-fifth Anniversary Report** of the United States Steel Corporation contains useful and significant medical and health data:

"The average yearly earnings per employee were \$717 in 1902, and \$1828 in 1925; in 1902 the average earnings per employee per day were \$2.33, and in 1925 the average was \$5.88.

"In 1925 the number of serious accidents per 100 men employed was 60.22 per cent less than in 1906 when these activities were started, and disabling accidents were 80.07 per cent less than in 1912. This means when stated in round figures that 46,863 men have been saved from serious injury, and 322,408 men have been saved from any injury which resulted in a loss of time.

"In addition the Steel Corporation has established communities, schools, clubs, educational facilities of various kinds, playgrounds, and a number of other conveniences and benefits for its workers and their families. From 1912, when the records are available, up to the end of 1925, it has spent on these various activities a total of \$158,188,043."

"There was a time when optometry consisted of putting window glass in steel frames and selling it at country fairs, but the optometrist of today must be a scientist in every meaning of the word, for the problem of vision is now known to be connected intimately with the entire subject of 'ether radiations' from x-rays to wireless waves."

The professor of physics who is thus quoted further voiced the opinion that certain problems in visual science require familiarity with physics, physiology, and psychology.—University of California Clip Sheet.

*What about a little pathology?*

The Federal Government wants doctors for the Indian Service, the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Veterans' Bureau, and other branches. Entrance salaries are from \$1860. Those interested may address the United States Civil Service Commission, Washington, D. C.

Since May, 1923, twenty-four counties in the state have been given such (Sheppard-Towner) nursing service. These nurses have established fifty-six permanent and fourteen transient centers to which mothers may bring their children for supervision and advice in matters of child hygiene. At the present time eighteen nurses, partly paid by these funds, are on duty in twelve counties of the state. The demand for this type of work and its ability to aid the mother's community is shown in the fact that within two years over 18,000 children were served in these health centers.—Ellen S. Stadtmuller, M. D., Pacific Coast Jour. Nursing.

Following up prior news items regarding the Board of Medical Examiners' investigation of R. Thompson Fowler, Secretary Pinkham sends us the following report made by Special Agent Henderson, and a report made by C. H. McCharles, chemist of the Bureau of Foods and Drugs, State Board of Health, showing the ingredients of Fowler's tuberculosis "cure":

"On June 17 R. Thompson Fowler was acquitted by a jury in the Superior Court of Oakland after a trial consuming two days, the defendant having been charged with a violation of Section 17 of the Medical Practice Act.

"Mr. and Mrs. Raddatz, 75 Dutton Avenue, San Leandro, California, testified that the defendant during the months of November and December, 1925, and January and February, 1926, had treated Mr. Raddatz for pulmonary tuberculosis, the treatments consisting of an inhalation process which Mr. Fowler claims is his secret formula and which is a positive cure for tuberculosis, the administration of internal medicine and by a number of intravenous injections given by Mr. Fowler, covering the entire period as above indicated; further, that at the outset of the treatments Fowler examined the patient with

the use of a stethoscope, confirming the statement of the patient that he believed he had tuberculosis.

"The defendant then took the stand in his own behalf and testified that he had in fact never owned a stethoscope and had not made an examination of Mr. Raddatz, but that the treatments given to the patient Raddatz had only been administered after Dr. David Grisso had called upon the patient, made an examination and directed the treatments which were given, thus raising the proverbial 'reasonable doubt' in the minds of the jurors and which perhaps explains the verdict rendered."

Chemists of the State Board of Health report that this alleged tuberculous cure "contains water, free sulfur, hydrogen sulfide, camphor, phenol, a small amount of guaiacol or creosote, sodium and potassium carbonate and sulfate and no lime and no arsenic."

**Health Officers Recently Appointed**—Dr. Edgar R. Brigham succeeds Dr. C. A. Tillotson as Health Officer of Dinuba.

Dr. Frederick R. Rhodes has been appointed City Health Officer of Culver City in place of Dr. Foster M. Hull.

Dr. George Rothganger has been appointed City Health Officer of Emeryville to succeed Dr. Emily Emery.

Mr. Charles F. Richardson succeeds Mr. Frank Jennings as City Health Officer of El Cajon.

Mr. A. F. MacLean has been appointed City Health Officer of Coalinga to succeed Mr. A. J. Shaw.

Dr. Gilbert A. Kelley of Bridgeport has been appointed Health Officer of Mono County.

The following California counties now enjoy the benefits derived from full-time public health administration: San Diego, Orange, Los Angeles, Santa Barbara, San Luis Obispo, Monterey, San Joaquin, Yolo, and Riverside.

**Prize Baby Contests Condemned**—The following significant resolution was passed by the New York Children's Welfare Federation recently:

"Whereas, The Children's Welfare Federation for twelve years has been in close touch with Prize Babies' Contests in this city, and during the years 1913 to 1917 inclusive took an active leadership in the use of this publicity device for arousing public interest in better babies; and

"Whereas, The Federation's experience in this connection has led to the conviction that the time has gone by in New York City for such campaigns, that such contests at best are unscientific and fraught with great danger to the babies participating and to the communities in which the contests are held; that they tend to disrupt organized work and produce dissatisfaction among the mothers of the competing babies; now, therefore, be it

"Resolved, That The Children's Welfare Federation in its Fourteenth Annual Meeting assembled, go, and it hereby does go, on record as being definitely opposed to Prize Babies' Contests and contests of similar character."

Time is recorded by the swing of the pendulum.

**For Shame!** Recently some of our newspapers that belong to organizations whose motto is "Truth in Advertising" have been selling space to such amazing hokum as:

"A man suffers from ill health because the oxygen in his blood fails to pass from the blood to the cells in a normal manner, and this in turn is the result of his iron not acting to its full catalytic measure. Wilshire's Ionaco by magnetizing the iron in the system increases its catalytic value with the effect that the oxygen passes more freely from the blood to the cells and the resulting increased oxidation tends to restore and establish health.

"It is astonishing what miraculous changes occur with people using the Ionaco. The first effect occurs usually within a very few minutes after coming in contact with the machine, and is seen in the heightened color of the cheeks and the brightening of the eyes. Very often neuritis of long standing is immediately relieved. Arthritis, a disease which baffles the physicians both as to its cause and its cure, has been deprived of its terrors, often in a few weeks. In diabetes the increase of oxidation is usually made apparent by the diminution of the elimination of sugar. Ionaco seems a rival to insulin. In cancer, usually no matter what progress the dread disease has made, the pain disappears, and where there has been odor, that too vanishes. A few minutes' treatment with the Ionaco immediately relieves fatigue, and a continued treatment of a few weeks seems almost invariably to restore gray hair to its natural color. In fact, Ionaco is a rejuvenating treatment without the dangers and disappointments of a gland operation."

Apparently not satisfied with this, the advertiser adds under a prominent cancer headline:

"Ionaco is the one proposed remedy for cancer in which

the supreme test of science—namely, the ability to predict—has been justified. Before we had treated cancer we said that, inasmuch as the cancer cells are known to require more oxygen than normal cells, they are more active in proliferation than the body cells, and hence conquer the body cells. The logical method of curing cancer, then, would be to give the cancer cells more oxygen and thus render them less active. The hungry dog sleeps when he gets his bone. This is the theory. Ionaco gives more oxygen."

The advertisement closes with the usual offer of "Delightful Free Treatments" and free lectures. How an honest, intelligent publisher can sell space to such hokum and remain at peace with his conscience is an enigma.

**Health Officers Newly Appointed**—Dr. J. Rollin French has been appointed city health officer of Avalon, to succeed Dr. Robert V. Baker.

Dr. T. P. Peery, beginning July 1, will serve as health officer of Sutter County in place of Dr. Smith McMullin.

Dr. J. B. Blackshaw has been appointed city health officer of Antioch in the place of Dr. W. S. George, who died recently.

Capt. David L. Adams has been appointed city health officer of Newport Beach, to succeed Mr. J. A. Porter, deceased.

**Treatment of Idiopathic Purpura Hemorrhagica**—The treatment advocated by J. W. Sooy and Theodore S. Moise, New Haven, Conn. (Journal A. M. A.), for idiopathic purpura hemorrhagica is said to be entirely symptomatic in nature, with chief emphasis placed on checking the hemorrhage and replacing the lost platelets. Ten cases have been treated. In two instances, the treatment was used as a method for the preoperative preparation of patients in need of surgical attention; in one instance, for the extraction of several teeth in a woman who had bled profusely for three days after a recent tooth extraction; and in a second patient with a marked hemorrhagic diathesis, on whom a tonsillectomy was indicated. These procedures were followed by a normal convalescence free from bleeding. The method of treatment in these cases has been as follows: On the first day the patient was given two exposures of six minutes each, at a distance of thirteen inches, on the entire dorsal and ventral surfaces of the body. The exposures were increased daily by three minutes for five days, after which the exposure may be increased in daily increments of ten minutes. It is rarely necessary to increase the exposure beyond twenty-eight minutes. This procedure gives a massive exposure and may produce a somewhat painful hyperemia. In such cases, the treatment is omitted on the following day. No serious burns have been observed. One case is reported in detail to illustrate the effect of this treatment on the disease. When the patient was first seen, June 4, 1925, the platelet count was 108,000 per cubic millimeter. She was given five daily exposures to the mercury vapor quartz lamp. On the fifth day, the platelet count was 242,000 per cubic millimeter. On account of a severe cold, the patient did not appear for treatments until five days later. At this time, the platelet count had fallen to 152,000, and there was slight epistaxis. Daily treatments were commenced, and after twelve days (June 25) the platelet count had risen to 546,000 per cubic millimeter. The treatments were discontinued about eight months ago, and there have been no further evidences of the disease. The blood platelet count has been maintained at the normal level.

**Interesting Results from Use of Parathyroid Extract in Case of Osteitis Deformans (Paget's Disease)**—Suggested by the work of Collip on parathyroidectomized dogs in which the administration of extracts of parathyroid glands raised the calcium content of the blood, this substance was employed by Anthony Bassler, New York (Journal A. M. A.), in a case of osteitis deformans with a happy result. In this case of steadily progressing Paget's disease no treatment was of any value up to the moment the parathyroid was started. Within a short time after its use was established a most marked change for the better occurred. The dose of parathyroid was 1/10 grain (0.006 Gm.) after each meal.

## CALIFORNIA MEDICAL ASSOCIATION

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### SECTION PROCEEDINGS 1926 SESSION (Continued)

**Eye, Ear, Nose, and Throat Section**—William H. Dudley, Los Angeles, chairman; Percival Dolman, San Francisco, Secretary.

The section held two meetings. The chairman's address was published in the June issue of CALIFORNIA AND WESTERN MEDICINE.

Edward Jackson of Denver was called to the chair and conducted a symposium on refraction, carried out as a general discussion of questions which were submitted prior to the meeting. The discussions were guided and summarized by Jackson in a masterly fashion.

Section officers elected for ensuing year: Percival Dolman, 1165 Flood Building, San Francisco, chairman; Barton J. Powell, Farmers and Merchants Bank Building, Stockton, vice-chairman; Simon Jesberg, 1151 West Sixth Street, Los Angeles, secretary.

Joseph Beck of Chicago then took the chair and conducted a symposium on Accessory Nasal Sinus Diseases. This symposium was based upon questions previously submitted and was conducted along the same lines as the one led by Jackson.

**Second Session**—The meeting was given over to the following interesting and unique program:

"Re-education of the Deafened Adult Through Lip Reading," Coralie N. Kenfield, Teacher of Adult Lip Reading, San Francisco Public Schools: paper and demonstration of lip reading by deafened adults.

"The Hard-of-Hearing Children in the San Francisco Public Schools," Blanche Van Deveer, Teacher of Lip Reading, San Francisco Public Schools: paper and demonstration of lip reading.

"Acoustic Education," Lilla B. McKenzie, Department of Acoustic Education, Central Institute, St. Louis, Missouri.

"The Oculist and Sight-Saving Classes: Preparation for Oncoming Blindness," Kate M. Foley, Home Teacher of the Blind, California State Library.

"What the Oculist May Do to Aid Blind Children Educationally," R. S. French, Principal California School for the Blind: paper and demonstration of reading by blind children.

At the close of French's demonstration the group of teachers who gave the day's program were thanked for their co-operation. A rising vote of thanks was given to Doctors Jackson and Beck for their part in the program.

### ALAMEDA COUNTY

**Alameda County Medical Association** (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting was held June 21, J. K. Hamilton presiding.

Program—1. "Principles of Medical Ethics of the California Medical Association"; discussion opened by W. C. Adams.

2. "Cancer and a Visit to Gye of London"—C. A. Dukes.

3. "Clinical Study of 100 Cases of Infection of the Urinary Tract" (illustrated with lantern slides)—W. W. Cross.

The code of Medical Ethics as adopted by the California Medical Association was discussed and adopted.

In his talk, "Cancer and a Visit to Gye of London," Dukes said that when in October, 1925, he visited Doctor Murray, who is in charge of the Imperial Cancer Research Fund in London, he was taken by him to visit Doctor Gye in his laboratories in the suburbs of London. He found it extremely interesting to be with these scientific investigators of cancer and get their viewpoints of the progress being made. The doctor said that Murray



is very enthusiastic over the work being done by Gye and feels that Gye is on the road to a more thorough understanding of the cancer problem than we have at the present time. Gye assured Dukes that he is not working upon the cure of cancer, but simply trying to establish the cause. During his travels Dukes came upon many proclaimed cures and theories of cures from the emetin treatment, the serum treatment advocated by the Germans and much thought of in Italy. At the time of his visit to Doctor Bier's clinic in Berlin, the Americans were not being very graciously received; in fact, at the time of his visit, clinics had been closed to American visitors. He believes that the misunderstanding which caused this situation has since been corrected. Dukes came back from his travels firmly convinced that early and thorough removal of cancer by surgery with the aid of radium and x-ray is the most promising form of treatment. The doctor found the fakirs strong everywhere and thinks that they should be discouraged by publicity through legitimate medical organizations.

W. W. Cross presented a paper upon a clinical study of 100 cases of infection of the urinary tract. Tuberculosis or gonorrhea was not the cause. These cases ranged in age from 5 to 70 years, the average 34, showing the condition present during active life. Of the 100 patients, 13 were males, 87 females. Blood pressures were low, blood chemistry normal. Urinary analysis disclosed pus in all cases, albumen varied from slight cloud to heavy precipitation. Microscopically, pus, red cells—an occasional case—and renal epithelium were present in the order mentioned. Slides demonstrated changes noted by pyelograms which varied from normal to complete destruction when considered as a composite clinical picture.



## PLACER COUNTY

**Placer County Medical Society** (reported by Robert A. Peers)—Through the courtesy of the Hobart Mills Company and by invitation of the medical superintendent, Dr. Richard O. Schofield, of Hobart Mills, the Placer County Medical Society held its regular meeting in Hobart Mills, Saturday, July 17. The members of the Society and visitors were the guests of the Hobart Mills Company for luncheon and dinner.

There were present the following members and visitors: Members—C. J. Durand, M. E. Thoren, R. H. Eveleth, Carl P. Jones, D. D. Johnson, D. H. Pettingell, W. L. Whittington, R. O. Schofield, J. A. Russell, R. A. Peers, H. N. Miner, W. A. Lavery, F. L. Fanning. Visitors—L. L. Stanley, San Francisco; Harry E. Alderson, San Francisco; Joseph Catton, San Francisco; R. A. Davison, San Francisco; Robert Howell, Auburn; G. W. Henry, Reno; C. D. Piersall, Reno; Robert S. Peers, Colfax; James P. Warren, Portola; J. A. Fuller, Reno; O. S. Cook, Sacramento; Horace Wrinch, Hazelton, British Columbia; J. E. Harbison, Woodland; J. A. Bernard, Truckee; Mr. Thoren, Weimar.

The literary program was as follows: Leo L. Stanley, San Francisco, "Testicular Substance Implantations"; Harry E. Alderson, San Francisco, "Skin Disturbances Due to Foods and Drugs"; Joseph Catton, San Francisco, "Medical Aspects of Fifteen Cases of Murder."

This meeting was one of the most successful and best attended of any meeting held by the Placer County Medical Society in recent years. The literary program was of a high order and of unusual merit. All the papers were well discussed. Following the literary program the members and visitors inspected the plant and the company's hospital.



## SACRAMENTO COUNTY

**Sacramento County for Medical Improvement** (reported by Bert S. Thomas, secretary)—The June meeting was held in the Gold Room of the Sacramento Hotel on the fifteenth. C. E. Schoff presided. The minutes of the May meeting were read and approved.

The paper of the evening was entitled "Contraceptive Methods." This was presented by James F. Cooper, medical director of the Clinical Research Department of the American Birth Control League. Cooper first reviewed the whole birth control movement, stating that

it had started on an emotional basis and had passed then to scientific people through the sociologists, the agriculturists and the biologists. He discussed various conditions requiring permanent and temporary birth control. By means of a questionnaire the league has found that the program of birth control has been adopted by three-fourths of the intelligentsia. This proves that the birth control movement is here, for Cooper adds: "What the classes do one day, will be imitated next day by the masses." The purpose of the league is to tie up the birth control movement with the medical profession, putting the proper knowledge in the hands of the family physician. In this way the information will be properly guarded and there will be no affront to the public. Cooper believes in preventing pregnancy where there is a real medical reason for it, but does not believe in interfering after pregnancy has once begun. The work of the New York Clinic, which has handled 6000 cases in two years, was summarized. Cooper concluded by reviewing various methods employed by that clinic and what the future plan of study is to be. The subject was discussed by Doctors Hanna, Topping, Hale, Lindsay, Wilder, Howard and Schoff.

Application for membership was read for the first time from Leonard W. Weaver. The applications of William E. Richardson and J. Hidetaro Miyasaki were read for the second time. A vote showed neither was accepted.

The board of directors reported that C. E. Schoff had been appointed as our representative to the Sacramento Federation of Social Agencies; also that E. Loiseaux had been appointed a Red Cross director and chairman of their first aid committee. The directors approved this action; also that Doctor Covington, of the Rockefeller Foundation for Public Health, had appeared before the board of supervisors to discuss the appointment of a full-time health officer. It was thought best for the board of directors to desist from making any comment to the supervisors on this subject.

The president reported the appointment of "a 1923 committee": Harris, Hale, Drysdale, Scatena and Bramhall; he also reported the replacing of Parkinson on the by-laws committee by Thomas.

Meeting adjourned.



## SAN DIEGO COUNTY

**San Diego County Medical Society** (reported by Robert Pollock, secretary)—On Tuesday evening, June 15, the staff of Mercy Hospital convened to discuss two important propositions submitted by the management, namely:

1. That in all cases, at least one other member of the staff should be called in consultation, before any major surgical operation be performed, except in cases of extreme emergency.

2. That a chief of staff for each department be elected to serve in the capacity of such consultant.

These resolutions brought forth by the chairman for general discussion were thoroughly thrashed out and at the close of the discussion were rejected as unnecessary, it being the almost unanimous opinion that the executive board of the staff could serve in such advisory capacity. Discussion on these measures was participated in by the following: Geistweit, Burger, Churchill, Weiskotten, Stealy, W. Potter, Reese, R. Carter, Andrews, Cornell, Eager, McColl, Strahlmann, Willier, Welpton.

The balance of the evening was spent in discussing the histories of cases that had died in the hospital during the previous month. This meeting brought out an unusually large attendance and was presided over by Doctor Burger.

On Tuesday, June 22, the staff of the San Diego County General Hospital held a very interesting clinical session. Doctor Arnold reported a case of multiple abscess of the pancreas, which had been removed at autopsy, as operation failed to relieve the advanced pathology.

Doctor Lee reported a case of stone in both kidneys with operation for resection of the more badly diseased kidney. This case had been carefully studied and showed good judgment on the part of the operator.

Doctor Strahlmann presented a group of children with

spinal disease arrested by careful orthopedic treatment. In one case an Albee bone-graft taken from the tibia gave excellent results and the little one's nutrition was advanced and general progress was very rapid.

Doctors Little and Ratty presented, in order to show progress, a case of tumor of the spinal cord, operated six months ago. This was a case of extreme interest from the diagnostic, surgical, social, and economic points of view, and brought out considerable discussion. Doctor Little also presented a young man who rather rapidly emerged from the somnolent depths of encephalitis lethargica after entering the hospital.

These clinical programs furnished by the staffs of our hospitals offer the finest kind of cultural opportunities. Each one is a condensed graduate course in itself. They are worthy a larger attendance than they usually attract.

On Tuesday, July 6, a special meeting of the medical society convened in the library to listen to a talk by Dr. Alfranio do Amaral, director of the Antivenin Institute of America, located in San Paulo, Brazil. The doctor is at present engaged in the United States on research and promotion work tending to establish a similar institution in our country for research work and the manufacture of specific and polyvalent serums for the treatment of the bites of poisonous reptiles of North America.

He spoke very entertainingly for an hour on the various poisonous snakes of North and South America, giving a graphic description of what has been accomplished in Brazil and of the detail work of the San Paulo institution. His descriptions were illustrated by lantern slides. At the conclusion of his lecture the doctor produced a couple of diamond back rattlers and showed how easy it was to catch them by the nape of the neck and make them disgorge their venom for laboratory purposes. In San Diego the doctor is having the co-operation of the Board of Park Commissioners and of the Zoological Society. He hopes to have the antivenin ready for commercial distribution in from six to eight months. He emphasized the fact that in agricultural districts snakes of all kinds seem to be rapidly increasing in numbers, his South American statistics showing a tremendous falling off in the number of deaths from snake bite during the past few years during which time the antivenin has been available for prompt treatment.

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### SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex. C. Soper, Jr., secretary)—The regular July meeting was held at the Cottage Hospital as usual, at 8 p. m. Monday the twelfth. In the absence of all the vice-presidents, the Society, on motion duly passed, elected Dr. Henry C. Bagby as temporary chairman.

Twenty-four members were present, with Mr. Curtis, the superintendent of the hospital, and Dr. Edgar F. Smith of Los Olivos.

The minutes of the previous meeting being read and approved and ordered placed on file, the professional part of the program began with a talk by Donald G. Clark, M. D., on "Lipiodol in Bronchiectasis," illustrated with x-ray films. This was discussed by Drs. Samuel Robinson, Henry Ullmann and Allen Williams.

The second presentation was a talk by Samuel Robinson on "Iodine in Treatment of Hyperthyroidism," based on his recent visit to the Crile Clinic in Cleveland. Drs. Rexwald Brown, Sansum, Freidell, Gray, Ullmann and Marion Williams took part in the discussion.

The third was five case reports by Rexwald Brown—operative cases with x-ray film reports. These very interesting cases were discussed by Drs. Bagby, Ullmann, Robinson and Pierce.

Thomas W. Shorkley of Carpinteria having applied for admission through the usual channels, was unanimously elected to membership.

The circular from the A. M. A. regarding "Medical Relief in Disaster" was read and approved. The next order of business was a presentation of a plan by Mr. Curtis of the hospital to institute a series of lectures to the public on health and dietetic measures at regular intervals next fall, and given by members of the staff.

This meeting with the approval of the Society, was endorsed and, on motion, passed unanimously.

The final business was the reading of a list of names of people in the community who had failed to pay their bills for medical service, the secretary endeavoring to interest the Society to enable him to keep such a list for reference for members, so that after a time the profession could be protected more than it has been.

On motion the meeting adjourned at 10:20 p. m.

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### SISKIYOU COUNTY

Siskiyou County Medical Society (reported by S. S. Kalman, M. D., secretary)—The Siskiyou County Medical Society met in the Granada Hotel, Granada, on July 11. Those present were: Doctors Ankele, Bathurst, Heaney, Kalman, Lucas, Nutting and Pius. Doctor Bathurst presented a paper on "Disorders of the Thyroid." His researches show that in Scott Valley endemic goitre occurs only in the west side, where the water is soft and poor in iodine. He warns against using iodine therapeutically except in simple colloid goitre and as preoperative procedure in Graves' disease. In the discussion following all members present took part. Doctor Pius made a plea for recognition of hyperthyroidism before the classical signs are present and stressed the importance of focal infections as possible causative agents.

After the meeting the doctors and their wives were guests of the Society for dinner, which kept them together for several hours.

### DEATHS

Todd, James Hamilton. Died at Piedmont, June 23, 1926, age 80. Graduate of Cooper Medical College, California, 1883. Licensed in California in 1883. Doctor Todd was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

White, Sherman T. Died at Redding, June 19, 1926, age 62. Graduate of the Eclectic Medical College, Cincinnati, 1888, and the St. Louis College of Physicians and Surgeons, Missouri, 1900. Licensed in California in 1892. Doctor White was a member of the Shasta County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Infant Feeding—Clifford G. Grulee, Chicago (Journal A. M. A.), reviews briefly the activities of the Infant Welfare Society of Chicago which, in connection with the stations of the Chicago Board of Health, covers the poorer districts of the city quite completely. The work of the two is about equally divided, and since the Infant Welfare Society was in the field first, the poorest districts are covered by its stations. There are twenty-five stations, and they take care of populations of all nationalities and colors. Of 2293 children under 1 year of age under the care of the society, 26.55 per cent were exclusively breast fed, and 71.5 per cent were exclusively or partially breast fed. Of 1531 children under 6 months of age, over half were exclusively, and seven-eighths were exclusively or partially breast fed. Only twelve babies had to be weaned for causes other than failure of milk supply before the 9 months' period. Cereals and vegetables were extensively used, both as adjuvants to breast milk and as part of the food given to those wholly artificially fed. Except for the substitution of some other sugar for sucrose, special formulas were used in only twenty-three cases, and acid milks were employed in only twelve of these. In spite of a severe respiratory epidemic, only nine babies were in hospitals at the time of this survey. The experiences of the society show that seven out of eight babies under 6 months of age can be fed in whole or in part on the breast. Cereals and vegetables can be used to advantage in feeding infants in the second six months of life. Acid milks are necessary in only one in 300 cases of infant feeding. It may be necessary to substitute for cane sugar some other form of sugar in less than 10 per cent of artificially fed babies. There is probably no advantage whether in the use of proprietary infant foods, and practically no indication for their use.



## UTAH STATE MEDICAL ASSOCIATION

T. C. GIBSON, M. D., Salt Lake City.....President  
W. R. CALDERWOOD, M. D.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GIESY, M. D., Kearns Building, Salt Lake, .....  
Associate Editor for Utah

### THE SKIRMISH LINE

Medicine, be it of whatever type, from public health instruction to the handling of the more technical problems which legitimately belong to the specially qualified expert in that particular line of practice, without the general practitioner is like an army without its points of contact—its skirmish line to first feel out the enemy.

Literally the general practitioner—that poor guy who for the last five or six years has been heralded as about to become an extinct species—is as essential now as ever, and in the future will be no less essential than he now is. For literally he is the soldier in the skirmish line of the battle against disease. He it is who first contacts the enemy, feels out his position, and reports on the condition as to the enemy's position and character and strength.

Contact between him and the patient should be humane, intimate as regards study, and close from the standpoint of mutual interest. Then, like the soldier again, when the position of the enemy (the nature of the disease) is developed, let him, if strong enough, press home his attack and, if not, fall back on the "support"—the man who specializes in such conditions—the "heavy artillery," if you like, to drive on the attack.

Nope! the bird professional or layman who thinks that the genus "general practitioner" is due to disappear from the medical field is, in the parlance of the day, all damp. The G. P. is still with us. Long may he wave!

### COLOR THERAPY OR COLOR BLINDNESS

We as a profession have rather been running to colors of late. We may almost be said to have been experimenting with a color therapy in a somewhat facetious sense, but with a grain of sense in the statement none the less. Mercurochrome is red and gentian violet is blue (sugar is sweet; at least that's true) and acriflavine is yellow past any denying. And we've been regaled with all sorts of sales literature of a scientific or quasi-scientific nature describing what these colorful chemicals will do. Veins by the thousand, nay by the hundreds of thousands, have been punctured for the introduction of the first two at least into the circulation. And the residuum of all this intravenous assault is what?

In the majority of instances, fortunately, the patients have survived; and *so have the organisms against which the attack was brought!* A *therapia magna*, the dream of Ehrlich, still seems to be a dream as much as anything else. The best that can be said for these products of the synthetic art appears to be that in a slight degree they are bacteria—static. Even the most ardent supporters of this type of therapy are coming to claim little more than that.

From a bactericidal standpoint their employment has seemed to have been a vast disappointment, another dream which has failed to come true.

And turning from hypodermic-intravenous medication, no more appears to have been accomplished by enteric medication with the same group of salts. Acriflavine may, it is true, affect to some extent the intestinal flora, but there is an actual danger in its continued use. It possesses a definite toxicity, and may, as appears from recent studies, result in a diffuse hepatitis if too long employed. True, each and every one of these chemicals has a certain proved and definite field of use, but aside from that field we can only feel that in the greater hope held out for their employment they, like so many of the theoretical agencies exploited in recent years, have failed.

And hence we are inspired to ask if the profession may not be in a measure afflicted by a mental color blindness in clinging to more than their essentially limited use; if no matter what the color of the salt employed, the total result of their continued employment beyond that recognized limited extent, is not apt to be the blues?

*We want to apologize* for the fact that the full report of the recent State Association meeting was not printed in the June number of CALIFORNIA AND WESTERN MEDICINE. This is not the editor's fault. The stenographic service employed to report the meeting faithfully promised to have the report in the hands of the editorial staff in time for press. But despite said promise, the air mail, 'n everything, they *failed*. We're not revengeful, but it would be poetic justice if when they present their bill for this delayed service they had to wait.

**Salt Lake County Medical Society** (by M. M. Critchlow, secretary)—The May 24 meeting was held at the Salt Lake County Hospital. The program was arranged by members of the hospital staff.

Clinical cases: Arthritis deformans, S. C. Baldwin; tic douloureux, G. N. Pace; general septicemia, G. R. Roberts; intraperitoneal transfusion, E. R. Murphy; tetanism, E. R. Murphy; lobar pneumonia—early simulating meningitis, E. R. Murphy; gunshot wound of knee, F. E. Straup; representation pulsating sarcoma, F. S. Scott; pathological specimen breast tumor, L. L. Daines; report of concussion with microscopic and lantern slides, N. Miller.

Septicemia discussed by L. L. Daines, F. C. Gibson, and G. N. Pace. Gunshot wound of knee, by F. S. Scott and L. N. Ossman.

C. Ralph Cornwall, L. E. Crowney, A. N. Leonard, and Thomas J. Welsh were elected to membership. O. Sundwall was elected by transfer from Utah County.

Refreshments served at close of meeting.

**At a special meeting** held at the Holy Cross Hospital, May 28, twenty-nine members and seven visitors were present. Stuart Pritchard of Battle Creek lectured on "Bronchiectasis," illustrated by lantern slides. His lecture was chiefly concerned with the intratracheal injection of lipiodol as a diagnostic of therapeutic measure in bronchiectasis.

**Meeting June 14** called to order by President F. H. Haley; twenty-five members, and no visitors present. The meeting was devoted to consideration of reports of committees.

**A special meeting** was held Friday, July 16, with President F. H. Haley in the chair. There were twenty-nine members and eight visitors present.

E. V. McCollum of Johns Hopkins University gave an extremely interesting talk on "A Recent Research in the Vitamin Field."

Major S. C. Gurney, medical officer of the 104th division, has been ordered to report for duty at the Panama Canal zone. Major Gurney for the past four years has been chief surgeon for the division, with headquarters in Salt Lake. At present he is conducting a medical school for reserve officers at Camp Lewis, Washington.

We record with the sincerest sympathy the death of the mother of Dr. T. William Stevenson last month.

E. F. Root, Salt Lake, was elected president of the Northwest Medical Association at the annual convention at Spokane. Edward I. Rich of Ogden was elected one of the councilors.

G. E. Christensen of Payson has been appointed to take charge of the full-time health unit of Utah County.

**Death**—Dr. Samuel Hunter Pinkerton, 69 years old, chief surgeon of the Oregon Short Line Railroad since March, 1897, died at 6:27 o'clock Saturday morning in Los Angeles, California, of pernicious anemia.

He was a pioneer in western medicine and an advanced thinker in other lines. He introduced physical examination of railroad employees nearly thirty years ago.

Born in New York City, May 27, 1857, Doctor Pinkerton in his earlier days attended the Bellevue Hospital Medical College in New York City, from which institution he was graduated in 1883. He was later a member of the Bellevue hospital staff from 1884 to 1885, as instructor of anatomy.

Doctor Pinkerton was prominent in the western country, having settled here in the early days, where he practiced his profession, and later being recognized as an authority on surgery. He was a member of the Utah State Medical Society and also was at one time a member of the staff of St. Mark's Hospital and was manager of the old Judge Mercy Hospital. The doctor was also one of the eminent members of the staff of Dr. W. H. Groves' Latter-Day Saints' Hospital.

Coming to Utah expecting not to recover from a serious illness which had caused him to be interned in the Bellevue Hospital from 1883 to 1885, Doctor Pinkerton got as far as Salt Lake City, where he was placed in a hospital. After several months of confinement he recovered and commenced what may be said to have been the most colorful and successful career of surgery in the West. He handled what was undoubtedly the largest surgical practice yet enjoyed by any member of the profession in the intermountain region.

Doctor Pinkerton is credited with the successful construction and equipping of three of the best railway emergency hospitals ever built. They are located at Pocatello and Glenn's Ferry, Idaho, and at the north yards of the O. S. L. in Salt Lake.

Supervising a staff of approximately eighty surgeons, Doctor Pinkerton also had the care of more than 15,000 employees of the railroad company. He performed some unusually successful operations for members of the company before the days of "safety first" and when safety appliances on railroad equipment were not known.

Doctor Pinkerton was also known for his devotion in helping those who possessed limited finances.

Doctor Pinkerton had been a member of the Alta Club and the Chamber of Commerce.

Among the things that he was a pioneer in was the introduction of physical examinations for candidates for employment. He introduced a physical examination on the railroad line twenty-nine years ago, and the standard of examination is still intact. The doctor was also a leader in advocating railroad sanitation in all branches of the company. He was a member of the staff of Governor Heber M. Wells of Utah during his term of office.

Doctor Pinkerton had been in poor health for a year or more and went to California in December, 1925, for treatment. He had resided in Salt Lake continuously since first coming here.

Surviving is his widow, Mrs. Alice M. Slavan Pinkerton, who is in Los Angeles.

Funeral services were held in Los Angeles.

J. C. Landenberger, formerly assistant chief surgeon of the Oregon Short Line Railroad, has been appointed chief surgeon to succeed the late S. H. Pinkerton.

Quite a number of the Medical Reserve Officers have been called up for active duty during the past month. Majors Maurice Critchlow, James Kerby, J. U. Giesy and Ossman, and Captains Wilcox, Woolsey, and Skofield have been at Fort Douglas in connection with the Citizens' Military Training Camp. Several others, a list of whom we have not been able to obtain, were called to the training school at Camp Lewis, Washington, for a period of instruction.

**Nontuberculous Peribronchitis Simulating Occult Tuberculosis**—Under the designation "chronic nontuberculous pulmonary infections" or similar cumbersome circumlocutions, Charles N. Meader, Denver (Journal A. M. A.), says there have been described from time to time groups of cases in children and adults presenting the symptoms of toxemia of varying grades, with chronic cough and expectoration and physical signs indicative of varying degrees of pulmonary fibrosis, sometimes associated with bronchiectasis. The sputum is persistently negative for tubercle bacilli, but contains one or more of the common pyogenic organisms. The course is often interrupted by acute respiratory tract infections, and the usual association of the condition with foci of infection in the upper respiratory tract has been emphasized. Sooner or later the earlier stages tend to become obscured by the development of asthma, chronic bronchitis or perhaps a bronchiectasis. It is significant that this group of cases has received much more attention since the recent pandemic of influenza. The clinical picture usually described as characteristic of these nontuberculous infections is to be compared with, and differentiated from, the well-developed forms of pulmonary tuberculosis; and this differentiation is usually not excessively difficult, if reasonable care and persistence in clinical and laboratory study are devoted to it. By contrast with the well-defined cases of tuberculous and nontuberculous infection, the symptoms and physical signs of the mild types of both tend to be vague and indefinite, and the temptation to regard the complaints as factitious is often great. Differentiation from occult tuberculosis cannot safely rest on any one symptom or physical sign, or on any one specific test. It must be based on a careful survey of the entire clinical picture, and a painstaking evaluation of the symptoms may be of quite as much value as the presence or absence of abnormal lung signs or the response to specific tests; the weight of evidence is alone trustworthy. It is important that these conditions be recognized and differentiated because, properly treated, they are susceptible of marked relief, but tend, if untreated, to the development of more marked and serious involvement; they offer materially different prognoses as to the patient's probable future limitations and respond to materially different forms of treatment.

The American people spend \$3,000,000,000 a year, or about 6 per cent of the national income, for vacations.

He is but a child who is afraid lest his friends and servants should perceive that he is sick either of a surfeit or a debauch. He that is ashamed to confess the crudity of his stomach today will tomorrow with shame confess that he has either a diarrhea, a fever, or the griping in the guts. You think it is a disgrace to want, but it is a greater disgrace to bear the crudity, heaviness and fullness of your body, when it has to be carried into the bath like a rotten and leaky boat in the sea.—Plutarch's Rules of Health.



## MEDICAL AND HEALTH AGENCY NEWS

The Health Officers' Section of the League of California Municipalities will meet in annual conference in the Yosemite Valley from August 16 to 20, 1926.

Mortality statistics of the hospital patients was discussed by the Saint Francis Hospital Clinical Society at the June meeting.

The obligation to explain the death of a patient to one's colleagues is calculated to promote the careful study, diagnosis and treatment that all patients are entitled to.

The Medical Library Association held its twenty-ninth annual meeting at Ann Arbor recently. Sixty medical libraries from all parts of the United States sent delegates; Mary E. Irish, Barlow Medical Library, Los Angeles, represented California at the meeting.

Officers of the association for the ensuing year are: John H. Ruhräh, Baltimore, president; Harvey Cushing, Boston, vice-president; Miss Biethan, University of Michigan, Ann Arbor, secretary; and Miss Loomis, Northwestern University, Chicago, treasurer.

Mrs. Irish has supplied us with a report of the meeting, which should have a great interest for members of the medical profession because the keynote was not what is of the greatest advantage to the librarian, but how can the librarian best serve the medical profession in obtaining and making available the greatest and best material for practical and scientific use or research?

The American Hospital Association announces the removal of its offices from 22 East Ontario Street to 18-20 East Division Street, Chicago.

The 1926 meeting will be held at Atlantic City, September 27 to October 1. William H. Walsh is executive secretary.

The Pacific Northwest Medical Association recently held a most successful meeting at Spokane. These meetings are attracting much attention because of the splendid way they are organized down to the last detail and because prominent invited physicians, many of them experienced teachers of medicine, take leading places on their programs.

Invited speakers at the recent meeting included Hans Lissner, San Francisco, who spoke and gave a clinic on Endocrine subjects; Howard Naffziger, San Francisco, addresses and clinics on Surgical Neurology subjects; Karl F. Meyer, San Francisco, who discussed local immunity and Tetanus; George Dock, Pasadena, who spoke on Neuropathies, Anemias, and conducted a medical clinic. Dock also spoke on "Modern Trends in Medicine" at a banquet, of which it is said—well, it won't be forgotten.

**Exophthalmic Goiter in Childhood**—Thirty cases of exophthalmic goiter occurring in children less than 15 years old are reviewed by Henry F. Helmholz, Rochester, Minn. (Journal A. M. A.). Compound solution of iodine, administered in doses of from 5 to 10 minims (0.3 to 0.6 cc.) three times a day, reduced the basal metabolic rates and toxic symptoms very markedly. It made preliminary operations unnecessary in the last eleven cases. Of twenty-four patients operated on, two died, one in crisis twenty-four hours after operation and the other from bronchopneumonia one week after operation. The duration of the symptoms, which varied from six months to eight years, indicates that frequently this disease is not recognized early or its seriousness is not appreciated. The patients came largely from Minnesota, Iowa, Illinois and Wisconsin, in the order named. Tachycardia was noted in 100 per cent of the cases. The thyroid gland was definitely enlarged in all but two cases. All but two patients complained of nervousness. Emotional instability was perhaps the most marked feature. Exophthalmos was definite in twenty-five of the thirty cases, and in one of the remaining five there was the characteristic stare.

## READERS' FORUM

*Dear Editor*—Another kick—no, not at *us*, but at the Government, or its administrators.

*Why*, in the name of all that is holy, should it be necessary for a reputable physician to send a "certified check" in payment of the measly \$1 Narcotic Tax fee? In this day and generation, when a man's check is ordinarily worth 100 cents on the dollar in any part of our country, it looks as if the Collector of Internal Revenue was putting something over on us. If it is not merely a local rule, the matter should be taken up with the Department in Washington, D. C., and satisfactorily adjusted. It is merely another instance of jamming us. Now everybody *holler!*

Yours groaningly,

(Signed) WILLIAM A. ROWELL.

P. S.—What could they do if one enclosed a \$1 bill—legal tender all over these United States?

San Francisco, June 30, 1926.

*Dear Editor*—writes a prominent non-medical man—"Today I listened to a radio talk by Mrs. A. Yuille (KFWM) on the responsibility of doctors for drug addiction, and it should be called to your attention.

"She quoted from Doctor Blair in the 'Survey' and charged the profession with 'majority of 75 per cent of the addiction which exists at present.' The whole talk was a defamation of the honor and integrity of the profession, and her statements were not in accordance with the facts and absolutely untrue."

This is a fair sample of many complaints about the misleading and even false propaganda that seems to constitute an increasing amount of the stuff of which some radio programs are made.

Los Angeles, California, July 14, 1926.

*Dear Editor*—The low esteem in which a noble and honorable profession is held by certain classes in the community is due to a variety of causes. In my humble opinion, the most potent of these is the habit of uttering in semi-private or semi-public occasions derogatory remarks concerning our fellow practitioners.

Another potent cause of this deplorable condition is the failure on the part of many doctors to uphold and defend the noble profession to which they have the high honor of belonging, against insidious and dastardly attacks.

To our shame, it is sad to relate, occasionally these attacks emanate, not from our avowed enemies, but from thoughtless members of our own profession.

A glaring instance of this occurred recently under my own personal observation. The circumstances were as follows: A doctor standing ahead of me in the line of applicants for renewal of the Harrison Narcotic License, in the office of the Collector of Internal Revenue, after filling out the inventory said in a loud voice, "Why, I use very few narcotics in my practice, but my competitors buy them by the thousand."

Can you imagine anything more disloyal and more despicable?

Another instance occurred a few months ago, at a regular meeting of a County Medical Society assembled to hear talks from the prohibition director and his associates.

In the course of the discussion which followed, in answer to an adroit question propounded by the prohibition director, a doctor calmly confessed, to the utter astonishment of all present, that about 99 per cent of all his whisky prescriptions were fraudulent. Anyone familiar with the psychology of the average doctor knew that this answer was given in a jocular spirit of bravado. It was to be taken with several grains of salt.

At a large meeting of a woman's club held a few days later, the prohibition director cited this to show

how little respect the average doctor has for the Eighteenth Amendment.

Despite the fact that for nobility of character and pure unselfishness the medical profession stands unrivaled, we must remember that we are in the land of the Philistines.

Yours truly,  
JOHN C. COPELAND, M. D.

### M. O. R. C.

California still lacks about 42 per cent, or 519, of its Medical Reserve Officer quota. Utah, which has responded 122 per cent, is now engaged in enrolling more officers to help make up the deficiencies of some of its sister states.

During June the changes in our territory were as follows:

	New Medical Officers Commissioned	New Applications Received
California .....	19	22
Utah .....	2	1
Nevada .....	0	0

The status of the entire Ninth Corps area is shown in this table:

	No. of physicians registered .....	No. of Medical Re- serve Officers each state should furnish	No. of Medical Off- cers enrolled.....	Percentage enrolled of total required.....
California .....	7,549	1,243	724	58.24
Washington .....	1,756	289	187	64.70
Oregon .....	1,158	191	164	85.81
Montana .....	568	94	99	105.31
Utah .....	497	82	100	121.94
Idaho .....	452	75	45	60.00
Wyoming .....	263	43	36	83.72
Nevada .....	140	23	10	43.3
Alaska .....	60	10	2	20.0
Total .....	12,443	2,050	1,367	66.68

### FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, name and address of executive officer of coming meetings for insertion in this directory.

American Medical Association, Washington, D. C., May 16-20, 1927. Olin West, Chicago, Secretary and General Manager.

California Medical Association, Los Angeles, April 25-28, 1927. Emma W. Pope, Balboa Building, Secretary.

Nevada Medical Association, Reno, Nevada, September 24-25. Horace J. Brown, Reno, Secretary.

Utah Medical Association, Salt Lake City, —. Frank B. Steele, Salt Lake City, Secretary.

Pacific Coast Surgical Association, Del Monte, February, 1927. Edgar L. Gilcreest, San Francisco, Secretary.

Pacific Northwest Medical Association, —. Frederick Epplen, Spokane, Secretary.

Pacific Coast Oto-Ophthalmological Society, San Francisco, —. Kaspar Pischel, San Francisco, President.

Northern California Medical Association, Woodland, —. John D. Lawson, Woodland, Secretary.

California Association of Physiotherapists, Los Angeles, April 25-28, 1927. Miss Mabel Penfield, 560 Sutter Street, San Francisco, Secretary.

Southern California Medical Association, Los Angeles, —. C. T. Sturgeon, 1136 West Sixth Street, Los Angeles, Secretary.

California Association of Medical Social Workers, Los Angeles, April 25-28, 1927. Mrs. Sophie Mersing, Mount Zion Hospital, San Francisco, Secretary.

Medical Women's National Association, Chicago, —. Lena K. Sadler, 533 Diversey Parkway, Chicago, Secretary.

California State Nurses' Association, —. Mrs. J. T. Taylor, 74 New Montgomery Street, San Francisco, Secretary.

American Association for the Advancement of Science, Pacific Division, —. W. W. Sargent, Secretary.

American College of Surgeons, Clinical Congress, Montreal, October 25-29, 1926. Franklin H. Martin, Chicago, Director-General.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

By CHARLES B. PINKHAM

Another instance of fraud in the making of doctors was recently uncovered by the Board of Medical Examiners following a thorough investigation of the credentials of Ralph M. Putnam, who, according to his application to the California Board, pursued his freshman, sophomore, and junior years of medical study at the University of Vermont, then going to the University of Southern California. There, according to his statement, he presented a fraudulent transcript showing completion of the first three years of medical study at the University of Vermont.

When called before Dr. Charles B. Pinkham, secretary of the California Board, for an explanation of the discrepancies in his professional record, Putnam confessed that through a friend who had access to the office records of the University of Vermont, he obtained a blank record transcript with the seal of the college attached, and that Putnam thereon wrote in his own statement of credits for three years' medical study. This statement, apparently bona fide, was accepted by the University of Southern California. After Putnam had completed his senior year in that institution he was granted a diploma conferring upon him the degree of doctor of medicine, dated June 17, 1920.

The records of the Board of Medical Examiners of Massachusetts showed that Putnam failed in the written examination in that state in November, 1920, March, May and July, 1921, and March and July, 1922. He is also reported as having failed the Connecticut examination, July, 1923, neither of these states having discovered the irregularities in Doctor Putnam's credentials.

The Putnam case is similar to that of Charles Barnard, who claimed on his application to the California Board that he was a graduate of the Atlanta Medical College, and explained his failure to produce a diploma of said institution by stating that he had placed his medical diploma on a mail box, said diploma being addressed to the Board of Medical Examiners, and had thereafter lost all track of said diploma. When confronted with the report by Secretary Pinkham that Atlanta Medical College disclaimed his graduating, Barnard acknowledged that he had not graduated from said medical college and that his story in connection with his diploma was untrue. Some time later it was learned that Barnard claimed a diploma issued by the Oriental University of Washington, D. C., whose president and owner, Bishop Hollar, was recently reported as having been given a prison sentence in connection with the Federal investigation of the recent activities of the diploma mills.

The value of the annual registration feature of the Medical Practice Act recently has again been demonstrated when an individual named David Franklin requested the Board of Medical Examiners to issue him a duplicate certificate, claiming that he had lost the original and that his medical credentials had been burned in the San Francisco fire of 1906.

In line with our usual policy, we requested this individual to submit an affidavit covering salient facts. We learned through this affidavit submitted by Franklin that he claimed (1) graduation from the Medical Department, University of the City of New York, 1878; (2) to have been licensed in California the year following; (3) that he had practiced in California almost continuously since 1879.

A thorough investigation developed the interesting story that Franklin's real name is Oscar (not David); that he was alleged to have been prosecuted for violation of the Medical Practice Act in Geneva, Nevada, some years ago, he leaving there rather suddenly; that for many years he had been practicing in California under the credentials of the bona fide David Franklin (1) who did graduate from the University of the City of New York in 1878; (2) thereafter became prominently identified with medical matters in New York City, affiliated with various medical organizations and hospitals, and (3) died in New York City in 1903, following an operation for appendicitis.

Prior to the passing of the annual registration law it was not possible to check up on cases of this kind, it



being particularly true in this instance, David Franklin having pursued a migratory practice in California for many years without molestation.

The medical profession has its share of impostors, making necessary constant vigilance.

Legitimate medical credentials are hard earned, and hence, the impostor is urgently anxious to acquire any documents which may give him semblance of a standing.

Diplomas, as well as state certificates, are frequently stolen from legitimate practitioners, with the idea that the thief may use these documents in obtaining a license to practice medicine and surgery. Dead men's credentials are also acquired with the same thought in mind.

Diplomas, licenses, etc., are manufactured by individuals who live in hopes that some value may be attached thereto or some right of practice earned thereunder.

An interesting case was uncovered recently by the Board of Medical Examiners. An applicant, admitted to the March, 1926, examination, pending the filing of fully completed satisfactory credentials, later admitted to the secretary of the board that a friend of his at the University of Vermont had stolen an official record transcript from the registrar's office; that said applicant had filled in a full statement of three years of alleged medical education at the University of Vermont; that this fraudulent document had been accepted by the College of Physicians and Surgeons, Medical Department of the University of Southern California, for senior standing, and that said institution had issued a medical degree following a one-year course of study. The applicant in question was emphatically informed that so far as the state of California was concerned, there was no room for him until such time as he completed a full course of medical instruction required under the law.

The annual registration is the one and positive means whereby an accurate check can be maintained to determine those legally entitled to practice under the laws of this or any other state.

According to newspaper reports, a recent ordinance passed by the Los Angeles County Board of Supervisors, requiring "vaccination of all dogs against rabies," has stirred up a protest on the part of the Orange County Chiropractic Association.

W. A. (Alfred) Bach is reported to have been recently arrested on a charge of violation of the State Medical Practice Act, and the preliminary hearing set for July 19, 1926, in the Justice Court of Riverside Township. The files of the Board of Medical Examiners show that Alfred Bach has on prior occasions been similarly charged. One of his specialties seems to be the opening of sanitariums and subsequent "high finance" in connection therewith.

The case charging C. D. Crutcher, M. D., with violation of the chiropractic law was recently dismissed on instructions of Justice Pawley. The investigator for the Board of Chiropractic Examiners declared that the practice of chiropractic on a medical license was illegal. Attorney-General Webb rendered an opinion to District Attorney Ford of Riverside County, wherein it is held that a certificate to practice as a physician and surgeon is unlimited and includes the right to practice chiropractic, etc.

A physician's alibi did not prove so good in the eyes of Judge Ezra Neff of the South Gate City Court last night when the trial of Dr. K. C. Dennis, charged with transportation and possession of intoxicating liquor, was concluded. The doctor was found guilty and fined \$250 on each of the two counts. . . . (Huntington Park Signal, June 17, 1926.) There is no record of an individual named K. C. Dennis licensed to practice as a physician and surgeon in the state of California.

Mrs. Abigail Ripley Smith was recently accidentally electrocuted while taking an electrical treatment for rheumatism, the report relating that she was alone in the office and unfamiliar with the operation of the high frequency machine which caused the accident.

R. Thompson Fowler, who has frequently been investigated for violation of the Medical Practice Act, as mentioned in "News Items" for May and June, 1926, was recently freed on a charge of violation of the Medical

Act, following his trial for treatment of Edward A. Raddatz, disabled war veteran. "According to the testimony of Raddatz, Fowler came to his home at 75 Dutton Avenue, San Leandro, in the latter part of 1925, carrying a stethoscope, examined him, and told him that he would give treatment at the rate of \$60 per month. Fowler, he testified, left thirty small vials with him, which he was to take at prescribed intervals. Later he testified Fowler prepared for him a steaming teapot, from whose funnel he was to inhale steam in an effort to cure, and the ailing man carried out instructions. The vials and steam breathing, however, were not the only means of seeking a cure, but there were also intravenous injections from time to time."—Oakland Times, June 17, 1926.

Even though he occupied a prison cell, life seemed good again today to Dr. Edward Gray, once a prominent x-ray specialist of Chicago, who during the last eight years has been an exile in loneliness—a fugitive from justice. Gray surrendered to Honolulu authorities last week, determining to face charges alleging he contributed to the delinquency of Leona Josephine Green, a Wallace, Idaho, girl, in California eight years ago. He fled from San Francisco shortly after his arrest at that time, forfeiting the \$5000 bond and was never heard of until he walked into the Honolulu sheriff's office here.—San Francisco Call, June 14, 1926.

The charges of murder preferred against Dr. J. G. Ham, his assistant Herbert E. Del Val, and Edward Seiffert were dismissed in Superior Judge Keetch's Court today.—Los Angeles Herald, June 29, 1926.

The State Board of Chiropractic Examiners yesterday filed suit in the Superior Court for an injunction to restrain Dr. L. D. Harding, 1067 Market Street, a licensed chiropractor, from practicing electrotherapy and certain other systems of healing, on the grounds that his license as a chiropractor limits him to certain methods. . . . The suit is brought as a test case in the interest of chiropractors who seek a ruling by the court that will definitely determine the privileges and limitations of a chiropractic license.—San Francisco Chronicle, June 24, 1926.

Harley H. Heddens, mentioned in "News Items" of December, 1925, and March and May, 1926, is reported to have plead guilty to a charge of violation of the Medical Practice Act, June 26, 1926, in the Superior Court at Bakersfield and sentenced to a fine of \$200 and to serve six months in the county jail of Kern County, said fine having been paid and jail sentence suspended for a period of six months.

Walter J. Heinrichs (or Hendricks), mentioned in "News Items" of June and July, was recently reported as held in \$2000 bond in Los Angeles on a charge of violation of the State Poison Act.

The Kansas City College of Medicine and Surgery today was ordered ousted from the state (of Missouri) and its state corporation charter was revoked by the Supreme Court. . . . (Kansas City [Missouri] Star, July 23, 1926.) It will be recalled that this Kansas City institution, as well as the St. Louis College of Physicians and Surgeons, was charged with the operation of "diploma mills" or the sale of medical diplomas.

Dr. Franklin E. Kerr, Garden Grove physician, sent to Leavenworth last Tuesday for five years for attempting to murder his divorced wife, Luella F. Kerr, by sending her poisoned candy through the mails, is "broke." Doctor Kerr yesterday filed a voluntary bankruptcy petition in the Federal Court, listing his liabilities as \$5545.25 and assets at \$475. Included in the liabilities was a \$3500 promissory note made out to Attorneys John S. Cooper and Louis D. Collings, of Cooper, Collings and Shreve.—Los Angeles Examiner, June 26, 1926.

County jail officers today prepared to take Dr. William H. Lochman to the poor farm following the sentencing of the aged physician by Judge Arthur Keetch on a charge of performing an illegal operation. The doctor plead guilty yesterday. Declaring him a menace to society, Judge Keetch sentenced the physician to a term of from two to five years in San Quentin, but suspended this verdict, ordering that Lochman remain at the poor farm for two years.—Los Angeles Herald, June 29, 1926.

Charged with fraud and deception in obtaining California credentials in his profession, Dr. Charles H. Wood, head of the Los Angeles College of Chiropractic and

former president of the California State Chiropractic Society, Southern Division, was today cited by the State Board of Chiropractic Examiners to appear at a meeting in San Francisco on July 12 to show cause why his license should not be revoked.—San Francisco Examiner, June 15, 1926.

Dr. Demayhew L. McDonald was recently reported charged by the Glendale police with cashing twenty-five "rubber checks." They totaled \$325. As he cashed the last one he was arrested. The records of the Board of Medical Examiners do not show anyone by this name licensed to practice in this state.

According to a recent report of Special Agent Carter, Howard Lee Moffatt, M. D., charged with prescribing narcotics not in good faith and with being an addict, was sentenced on the fourteenth day of June, 1926, in Department 5 of the Municipal Court of the City of Los Angeles, to serve six months in the county jail, said sentence being suspended by the court for a period of two years on condition that defendant take treatment for addiction.

Dr. Fred A. Oaks, chiropractor of 225 Taylor Street, San Francisco, today was cited by the State Board of Chiropractic Examiners to show cause why his license should not be revoked for performing an illegal operation.—San Francisco Call, June 30, 1926.

Dr. A. E. Pike, former mayor of the City of Signal Hill and owner of an osteopathic sanitarium, was yesterday reinstated to the practice of osteopathy by the State Board of Osteopathic Examiners. . . . About two years ago the board passed a resolution revoking Doctor Pike's license on the ground that he improperly used the letters "M. D." after his name as it appeared on his reception door. . . . —Long Beach Sun, June 17, 1926.

Dr. John H. Seiffert, found guilty by a jury of second degree murder for the death of Mrs. Louise Giovanazzi, following an illegal operation, was sentenced to San Quentin Prison today by Judge Lacy D. Jennings for a term of from ten years to life. . . . Notice of appeal and stay of execution was granted.—San Diego Sun, June 9, 1926.

According to reports, W. P. Seipert, mentioned in "News Items" of June, 1926, has been arrested by the Chiropractic Board for practicing without a license and the case set for trial July 7, 1926.

Carl J. Weberg, D. C., president of the Pasadena Chiropractic College, mentioned in July "News Items," is again in difficulty with the Pasadena Health Department, which has questioned Doctor Weberg's legal status in handling maternity cases, in view of the fact that his petition to establish a maternity hospital in Pasadena was refused last year. This recent difficulty arose following the death of the infant daughter of Mrs. H. B. Wright, which occurred after she had been revived twice by the Fire Department Inhalator Squad. Doctor Weberg was a hosenman in the Pasadena Fire Department until September, 1920, when he was suspended by Chief Coop for insubordination.—Los Angeles Times, June 22, 1926.

Dr. Robert B. Williams, a local physician, was indicted by the United States Grand Jury yesterday on a charge of sending poison through the mail. It is alleged that Doctor Williams sent sixty grains of morphine to Mrs. Hattie Page, Route C, Box 5, Hanford. A bench warrant was issued for the arrest of Doctor Williams and bail was fixed by Judge A. F. St. Sure at \$5000.—San Francisco Examiner, June 29, 1926.

A. M. Waters, self-styled physician, was released from the county jail on \$2500 bond late yesterday through the efforts of his attorney, George Stoddard. Following Waters' preliminary hearing in Judge Thomas L. Ambrose's Court, the defendant was held to answer on a charge of grand larceny by trick and device and obtaining money by false pretenses and extortion.—Los Angeles Examiner, June 13, 1926. The records of the Board of Medical Examiners do not show anyone by the name of A. M. Waters licensed to practice in this state. Our violator file shows that an individual named Archibald M. Waters had his Michigan certificate revoked in 1907.

"After serving 117 days in the county jail on a sentence of one year imposed for misuse of the mails, Dr.

S. M. Wells was freed on probation yesterday by Judge McCormick. He was convicted in connection with the promotion of the Co-operative Oil Syndicate of Santa Fe Springs."—Los Angeles Examiner, June 16, 1926. According to report, S. M. Wells, James P. Fer Don and William Vurbillat were convicted of misuse of the mails and fraud in the promotion of an oil syndicate in April, 1925. Fer Don and Vurbillat were sentenced to two years in Leavenworth, and we understand were paroled after serving one-third of their sentences. Seth M. Wells was denied a license to practice in the state of California after an investigation of his antecedents.

At a meeting of the Board of Medical Examiners, held in San Francisco, July 13 to 15, inclusive, the following action was taken in the specific cases as enumerated:

Bromley, R. Innis, M. D.—Five years' probation, the terms requiring that he give up his narcotic permit and not receive or apply for one within the period of one year after July 15, 1926.

Brown, James T., M. D.—Five years' probation, commencing July 13, 1926, the terms requiring him to give up his narcotic and alcohol permits during the period of probation.

Elliott, Charles R., M. D.—Certificate revoked July 14, 1926.

Kerr, Franklin E., D. O., M. D.—Certificate revoked July 15, 1926.

McAdory, Robert J., M. D.—Certificate revoked July 15, 1926.

McKibbin, Rupert E., M. D.—Certificate revoked July 15, 1926.

Nelson, Arthur B., M. D.—Certificate revoked July 13, 1926.

O'Hara, T. Jerome, Naturopath—Certificate revoked July 13, 1926.

Owen, Jacob L., M. D.—Five years' probation, commencing July 13, 1926, the terms being that he shall not apply for or receive a narcotic or alcohol permit during the term of probation.

Rinker, Casper L., M. D.—Five years' probation, commencing July 14, 1926, the terms requiring that he shall not apply for or receive a narcotic permit during the period of probation.

Smith, Clarke S., M. D.—Certificate suspended for five years, commencing July 14, 1926.

Wakefield, Orin R., M. D.—Certificate revoked July 15, 1926.

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When we say typhoid fever is caused by the typhoid bacillus, we leave out the "ifs"; we simply make the broad statement of cause and effect, and prove it. This is a good time to speak of typhoid, for it occurs as an annual crop from July to October, attacking the individual just at the period of his greatest economic value to the community, and entailing a yearly financial loss of nearly \$100,000,000 to our country; a disease absolutely preventable, a disgrace to a community because it is a disease showing defective civilization, and one in which the community paying the least attention to modern sanitation suffers most, as it should, for the individual cannot wholly protect himself without the aid of the community.—Ohio Health News.

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The Division of Social Hygiene reports a steady increase in the number of children receiving clinic treatment for congenital syphilis, the average monthly attendance so far this year being 426 as against an average of 251 in 1924.—Health News, New York.





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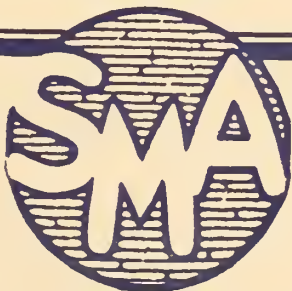
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# CALIFORNIA AND WESTERN MEDICINE

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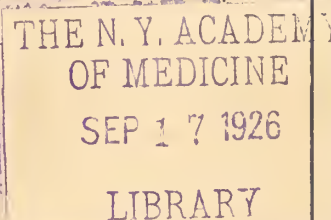
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Volume XXV SEPTEMBER 1926

Number 3



## What is Mead's Standardized Cod Liver Oil?

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# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXV

SEPTEMBER, 1926

No. 3

## THE RELATION BETWEEN PHYSICIAN AND PATIENT

By H. D. LAWHEAD, M. D., *Woodland, California*

THIS relation should first be natural and free from restraint. It should rest in mutual confidence. We hear much about the necessity of the patient having confidence in his physician and this is absolutely essential, but it is also necessary that the physician show confidence in his patient, so that the patient may speak freely and feel that his statements are accepted with assuring confidence. This means getting acquainted with the patient as a human being naturally endowed with the same sensibilities as his physician. His psychology is wholly that of the layman. Hence he is entitled to special consideration as a layman. The average patient considers himself an ordinary individual and is often overawed by the dignity, professional airs and sometimes austere manner of the doctor. He will not presume an equality nor intimacy. This intimacy is particularly true of some women and most children.

Besides, the patient being below par both physically and mentally is on this account painfully sensitive and introspective. The physician should disarm this awe and timidity as promptly and as tactfully as possible, and he can nearly always do this easily if he is willing to show himself sympathetically human as well as intelligently professional. Such introduction will relieve embarrassment, dissipate fear, overcome hesitancy, and place himself and his patient on a sort of social equality and render professional approach easy and his patient responsive. The physician should combine kindness and sympathy with a dignified simplicity. Embarrassments are naturally greater for the patient who goes to an institution or to a physician's office than it is when he is seen at home. Hence the office patient should be seen as promptly as possible and have such attention as will put him at ease, and some treatment should be instituted immediately, because treatment and personal attention are what the patient comes for and, to the anxious patient, delay often means indifference, if not neglect.

So much for the establishment of personal and professional relations. Not only should treatment be begun promptly, but throughout treatment the patient should be seen as often as practicable, no matter how favorable his progress toward recovery may be. Frequent cheery visits prevent loneliness and introspection and inspire hope. Especially should every promise made to a patient be sacredly kept. Nothing else so discourages and disaffects a patient as a broken promise. To the patient his individual trouble is the whole problem, and though he may know or should know that the physician has many others to whom he is under equal obligation and that the doctor has many interruptions, he is seldom able to so far forget his own discomforts as to excuse what appears to him a deliberate neglect. If the physician cannot keep his appointment he should see to it that the patient knows the reason.

Next as to the manner or method of service. *A generation or so ago the physician treated the patient. Today the tendency is strongly for the physician to treat the disease as a definite engrossing entity and either to forget the patient or to treat him as a sort of secondary accompaniment or case.* Science is superseding clinical experience and observation. The modern method is scientific pathology, rather than human psychology. *Formerly the doctor studied the individual; today the physician investigates a case.* Pathology is cold and inanimate, and has neither soul nor sentiment. Such treatment is an unexpected and rather chilling experience to the patient who knows nothing of the abstract and tedious processes of the laboratory to which the physician transfers his attention. He wonders what is happening. He cannot understand why he now waits two or three days at heavy expense for diagnosis and treatment, which he formerly received in a few minutes from his old doctor for \$2.50. Here again, a little immediate personal attention and careful explanation will relieve suspense and not only satisfy but please the patient.

But why this change of attitude by the physician toward his patient? The modern physician is as a rule not conscious that his professional personality is so different from that of his father, and the patient cannot understand the doctor's manner because he knows nothing of the changes which have produced this new, professional personality. Moreover this is not a personal matter with any individual physician; it is becoming general and is increasing. I doubt whether the average busy physician or surgeon realizes how little personal consideration he gives his patient as a human sufferer who is hungry for sympathy and companionship. Imagine, if you can, a consultation in which four physicians examined a patient and discussed most intelligently and scientifically every aspect of his disease, but not one among them could give the patient's name or state any of his distinctive human qualities, notwithstanding one of the number had written a detailed and most interesting history—a history which made a clear, scientific

diagnosis, but without a spark of vital human understanding. Is the medical profession departing from that high ethical standard which established medicine as the most dignified and honorable of the learned professions? Are we losing the sympathetic human touch to which the patient's heart gladly responds? If so, what is the reason? Is it commercial, psychological, economic, educational, reactionary? Is it due to specialization; is it due to institutional training; will the change result in betterment of service; if not, can you suggest a remedy?

It is very probable that all these factors figure in greater or less degree in the change. The economic conditions of modern life appear to render a measure of commercialism almost necessary for the medical man. The demands upon his purse have increased and are still increasing out of all proportion to his income. These demands fix upon him a moral obligation which he must meet, and to meet it he may feel justified in resorting to strenuous business methods. Observation would seem to indicate that the change is not psychological, but rather that the neglect of the study and knowledge of the patient's psychology is partly responsible for present conditions. This change of attitude is probably reactionary only insofar as the modern physician rejects the clinical and empirical methods upon which the older practitioners had to depend, and clinical methods of the older type mean closer personal intimacy.

Education evidently has very much to do with both the ideas and ideals of present-day practice, not so much in the actual knowledge imparted, however, as in the type of teachers and methods of teaching. Present-day medical teaching is ultrascientific, specific, and exclusive. There is no medium through which the medical student or intern or even post-graduate is brought into the intimate home atmosphere. And it is impossible to know people intimately or sympathetically except through some contact with the home.

Medical teachers of today are mainly specialists; whereas the teachers of half a century or more ago were mostly general practitioners, or at least physicians who at some time had done practice which gave them intimate home contact. Such teachers, knowing the psychology of the home and its members, naturally, but perhaps unconsciously, transfused among their students more or less of the humane spirit. Formerly it was not unusual for a professor or instructor to ask senior students to accompany him to the homes of his patients. The whole trend of medicine is now toward specialization. This is not only natural but unavoidable. The field is so large that, as the various sections and departments develop, it is only by segregation and specialization that the vast work can be handled. And the specialist cannot know the composite individual. His attention is necessarily limited to his special portion of the organism. Thus he loses interest in the human cosmos.

Institutional training is a very potent factor in the recent changes. It is difficult to determine whether specialization or institutional training has the greater influence. Even our larger universities with their medical departments, with their fully equipped laboratories, realize that the wholly scientific environ-

ment, while it qualifies the student pre-eminently for the study of disease, disqualifies him for successful contact with and service to patients not familiar with institutional methods. In fact so fully is this realized that some of the universities, the University of Pennsylvania, for example, are establishing a type of university extension course through which physicians in different parts of the country may have the benefit of the advances in medicine and surgery without breaking their home contact.

Commenting upon the modern medical school, Arthur (Journ. Ind. Med. Assn., May, 1924) says: "It has been truthfully said that our medical schools are unfitting men to practice medicine at the bedside. This being true, it follows that they are defeating the main purpose of the schools, which is the development of general practitioners of medicine." Speaking of medical teachers, Arthur continues: "Too many of them are not concerned with medical knowledge, but are conducting their work for the sole purpose of building up their science." I do not believe any true medical teacher does this consciously. G. Van Ness Dearborn is quoted by Arthur as saying of our medical schools: "Obviously, they have in general belied their high privilege of first studying and then teaching the relations and mutual dependence of body and mind; they have neglected psychology." To which Arthur adds: "We should have only applied physical science taught in our undergraduate medical schools along with a well-grounded course in applied psychology."

Review of medicine within the last fifty years shows that within this half-century the practice has passed through three stages, as follows:

First—That which Professor Henry Gibbons, Sr., termed rational empiricism.

Second—Therapeutics as an art represented by such leaders as Dr. Frank R. Billings.

Third—The scientific method of the present day.

But whither are our scientific and commercial methods leading us? Always conservative and manifesting an attitude of aloofness, we have never seriously cultivated an interest in the common people and their common needs. We as a profession have never been of the people. Instead, especially *since institutional treatment has become so general, we have substituted the laboratory for the bedside and the hospital for the home, and left the broad and fertile field of community interests and ailments to be exploited by the ignorant but cunning and mercenary quack.* The extent to which the medical profession, and consequently the public health, has lost to the cults is indicated in the following statement by Alice S. Cutler of Los Angeles who found that of 120 women and girls examined by her, and each of whom she asked who was her family physician, 722 employed osteopaths, 120 chiropractors, 133 Christian Scientists, and only 125 educated non-sectarian physicians (10 per cent). These figures, however, may not fairly indicate the general status throughout the country, as these examinations were held in Los Angeles, where cultism is notoriously strong. But at best they are neither comforting nor assuring. A broader study of this subject together with a careful consideration of the type of capable men who stand at the heads of our leading medical schools will, I believe, discover that the cause of our



present medical indifference lies further back in our educational system than the medical colleges, even further back than our literary and scientific colleges. Our young people, both men and women, appear to lack the ethical sense or regard which characterized the students of a generation or two ago. Take Harvard University, formerly the aristocratic high-water mark of culture, medical learning and classical erudition, among American institutions. Today without the asking it gets a \$5,000,000 endowment for the establishment of a commercial school to train young men for positions at \$10,000 and up, while the head of the department of dramatics was denied \$3000 for necessary equipment for original dramatic work. Is it not possible that in our rapidly developing science and materialism we are neglecting in our homes and our schools those moral and ethical influences and principles which underlie human action?

Thus far we have implied that the medical profession is responsible for present conditions. And this is true in the main, but the responsibility does not all belong to the profession by any means. Modern education with its various adjuncts, from the university to the farm bureau, amplified through the daily newspapers, literary magazines, free libraries, rural delivery, automobile, telephone, radio, etc., has narrowed very much that "no man's land" socially between the profession and the people. Under these various privileges and stimuli many people have grown so independent and mandatory that they expect and sometimes demand of the physician unreasonable or impossible considerations.

Neither should we underestimate the value of scientific medicine or discourage independent research. Through these and these alone comes all substantial progress in medicine, surgery, sanitation and preventive measures. Evidently, however, there is a normal mean between these extremes which, if reached and maintained, would so blend and harmonize clinical observation with modern scientific methods as to yield the best service to the patient and the greatest satisfaction to the physician.

Feeling that this subject was of considerable importance and desiring to present a consensus of the best opinion available, I sent the following letter to a number of prominent physicians, and their replies are appended as discussion:

#### THE LETTER OF INQUIRY

"My dear Doctor—I trust that the importance of the question involved may excuse the liberty of this inquiry.

"Is the medical profession departing from that high ethical standard which established medicine as the most dignified and honorable of the learned professions? Are we losing the sympathetic human touch to which the patient's heart gladly responds?

"If so, what is the reason? Is it: 1. Commercial. 2. Psychological. 3. Economic. 4. Reactionary. 5. Educational. 6. Is it due to specialization? 7. Is it due to institutional training? 8. Will the change result in betterment of service? 9. If not, can you suggest a remedy?

"The reason for this inquiry is that, whereas in the past the physician treated the *patient*, the present tendency appears to be for the physician to treat the *disease* as a distinct entity."

#### REPLIES

T. C. Edwards (Salinas, California) — I have thought long and seriously about the things mentioned in your questionnaire. Quick transportation

is mixing people so much of late that the intimacies of a few years ago are becoming the casualties of today. The \$ is too frequently the veil through which the patient is seen. Specialism does not see the patient at all. Whatever lessens genuine personal service is making us mercenary in the eyes of our patients.

Answers to questions submitted:

1. Commercial: I think this is entering into medicine to a greater degree than formerly and acts as cause.

2. Psychological: No.

3. Economic: I do not think so.

4. Reactionary: No. We all believe that such step has not been a reaction. We react from things we dislike.

5. Educational: Rather lack of education showing the gain by intimate personal service.

6. Is it due to specialization? I think this important cause.

7. Is it due to institutional training? Partly.

8. Will the change result in betterment of service? I think not.

9. If not, can you suggest a remedy? Insist that every M. D. be taught by precept and example that personal service to the patient does more toward restoring disfunction than any or all remedies save the near specifics, viz., antitoxin for diphtheria, etc.

J. Wilson Shiels (San Francisco)—If ethics be the knowledge of right conduct, based upon commendable character, and man's right conduct ever holds a high moral obligation to do to others as one would wish others to do to one, then I do not think the medical profession as a whole has lost one whit or departed from the standards of splendid honor producing its past dignity.

There must ever be good and bad in all professions, however sternly set down the rules of conduct. Honor and all ideal attributes of character come from within, out. The rules guiding men to selfless distinction are never potent enough to awaken a dead sense. They may create a veneer, but not truth. But I deem, however ethical, we *are* "losing the sympathetic human touch," and this loss is deplorable and the direct consequence of an ever-increasing knowledge of cause. We seek cause with scientific heartlessness. A clever definition of a corporation is: "An artificial person without a soul." We might well paraphrase this and say: "A scientific man is truly a person without a soul," for to be soulful is to be kind, and kindness, producing sympathy, frequently misdirects the search for cause.

I do not think that one, two, three, or four of your questions influences the sympathy of men worthy of our profession unless of course you mean by "reactionary" the result of ingratitude on the part of the patient; then truly we must realize this as a factor in the loss of sympathy, for it is hard to be kind and understanding when ingratitude exists. It takes a man of unusual quality to wipe out ingratitude with love. Most of us are quite vanquished by it.

Five, six, and seven. Do most assuredly dull the edge of human touch, for we utilize the sufferer as clinical material for the development of our own welfare and *pride*.

The remedy is to exalt and emulate the old doctor,

for he was ever one who made two words of the word "gentleman" and, while doing so, reverently let us add to his sanctity a high selfless scientific knowledge, and when this knowledge can no longer bring cure or surcease of pain, give the sufferer the understanding love of brotherhood.

**Herbert C. Moffitt (San Francisco)**—It is difficult to answer your questions singly. I feel as many men do who have been long in medicine that the practice of the profession is becoming less satisfactory than it used to be. This is partly the fault of the public and partly the fault of ourselves. People nowadays generally have very little faith and very little patience. We have been trying the last years to teach them a smattering of medicine and have unfortunately encouraged them to look for quick results in treatment. Enthusiasm of surgeons, whether on account of lack of proper patience or sometimes for commercial reasons, has, I think, reacted badly on the practice of medicine. There can be no question that we have been making medicine too expensive for many people and emphasizing the necessity of laboratory investigations far beyond their importance. There is no question that our training in medical schools in the last ten years has tended to specialization and has not encouraged the true art of medicine. It is just as difficult to suggest a remedy for the present medical situation as it is to suggest a remedy for our legislative overactivity. I feel that overemphasis has been given to the necessity for hospital treatment and that we shall later return to a different type of general practitioner, one who will have more help in the way of proper assistants and nursing staff, but who will at the same time resume the personal relations with his patients and keep them for a number of years, directing when necessary what specialist they should consult rather than have them choose unwisely special treatment on their own volition.

Apparently there comes every once in a while a generation which harks back to restlessness and lawlessness, and it takes about another generation to reach solid ground again. Fortunately after reaching a new level it is usually a higher one than before, and I think that after some further years of unrest in the profession, medicine will again get on a more satisfactory basis. I should be very much interested to find out what conclusion you have reached after a study of the situation, as I have written once or twice in the last years on similar subjects.

**W. J. Mayo (Rochester, Minnesota)**—No medical graduate should be allowed to enter a specialty until he has had at least two years' general practice, preferably in the country. The young man leaving his school or internship is well equipped with theory and scientific knowledge, but is only half qualified for successful service. He lacks that experience and personal contact with humanity which is equally essential for success.

**Ray Lyman Wilbur (Stanford University)**—In my opinion there is a marked tendency to lose the human touch in the practice of medicine. I think it is because the main attention of the profession has been engrossed during the period of very rapid change with the application of the newer developments. With the laboratory and other modern methods of teaching, diagnosis has assumed such im-

portance that many have felt that when the diagnosis was made the real job had been accomplished. Decreased interest in therapeutic measures of all sorts has brought about the remarkable recent development of the various cults.

I think that we can make some considerable improvement with the medical students who are being trained at the present time, but that the profession trained in the last few years will have to learn by some rather severe lessons.

**Frank Smithies (Chicago)**—I do not think that we as physicians are losing the sympathetic human touch. At times it would seem that the struggle for existence results in men forgetting that we have ethical standards.

While we may have neglected human psychology, one must not forget that the various maneuvers of laboratory diagnosis exert a psychology probably as satisfactory as what you term bedside psychology. There is no question that personality is a very important part of the physician's armamentarium for practice, but there is equally no question that many men are simply personality doctors who do very little for their patients.

There is no doubt about some physicians getting into specialty work too early. In my opinion every physician ought to have at least five years general work before he takes up a specialty. I think also that frequently the attempt to make a patient fit into a specialist's line robs that patient of much assistance which could have been assured by general examination and treatment. I do not think the human touch is lost because of the type of medical education and training the physician receives.

**Frank Billings (Chicago)**—Overspecialization in medicine, greatly accentuated by the World War, is likely to induce a loss of perspective and the patient is viewed no longer as a human being, but solely as a case. Scientific laboratories are necessary, but they should not displace the trained hand and trained mind of the industrious, painstaking and sympathetic general practitioner. The future safety, health and prosperity of the people demand the preservation of the character-building home, and as a factor in the necessary principle of community welfare the family physician and his domiciliary visits are essential.

1. There is an unfortunate and increasing lack of intimate personal contact between physician and patient for which the doctor is mainly, and the patient partly, responsible.

2. This is due largely to ultrascientific training by highly specialized teachers, the patient serving simply as the material which the scientist investigates regardless of feeling or personality.

3. To exclusive institutional training and treatment which prevent home contact and personal relation.

4. To indifference on the part of the profession to certain types of physical treatment of which the mercenary and unscrupulous quack has taken bold advantage, thus displacing and discrediting the conscientious though conservative physician.

5. The tendency of graduates to leave college as specialists.

6. To extravagant privileges, opportunities and indulgences, especially on the part of our assumed



"better class," through which these people expect and even demand unreasonable and sometimes impossible considerations.

7. The "no man's land" between science and human psychology should be reduced to the minimum by a clearer understanding, stronger sympathy, and closer and more harmonious co-operation between clinical medicine and scientific investigation, made practical by such instruction to the medical student as will enable him, when a physician, to approach his patient with sympathetic understanding.

8. We believe that general medicine developed as scientifically as possible and practiced as a true art should be the basis of all specialties, and that to this end human psychology and personal contact with average patients should form a part of every medical student's education.

We believe this can be done and will be finally accomplished.

### SUPRAPUBIC PROSTATECTOMY†

By VERNE C. HUNT\*

(From the Division of Surgery, Mayo Clinic)

*An unprejudiced analysis of the mortality rate and ultimate functional results leaves little choice among the modern methods of prostatectomy.*

*Of prime importance is the general management of prostatic obstruction, with bladder drainage either by urethral catheter or cystostomy as the keystone, prostatectomy being merely incidental.*

*To achieve the best ultimate results and lowest mortality rate requires preliminary treatment in all cases, accurate surgical expedition, and careful post-operative management.*

Discussion by Anders Peterson, Los Angeles; Granville MacGowan, Los Angeles.

THE field of general surgery is so broad that it no longer is possible for a surgeon to remain proficient in all its branches. In order that the patient may profit by the increasing scope of surgical knowledge there must be a division of work, and specialization to a certain degree must be adopted if progress in surgery is to continue. The specialization of thyroid, neurologic, thoracic, and orthopedic surgery to the degree of particular attention to these fields, but not necessarily to the degree of excluding other fields of surgery, has resulted in a higher type of co-operative work, the exercise of riper judgment, better end-results, and lower mortality rate.

Deaver has shown that the average mortality rate following the operation of prostatectomy by the inexperienced or the occasional operator in this field of surgery is between 20 and 30 per cent, while the average mortality rate following the operation by urologic surgeons or those paying particular attention to this field of surgery is between 3 and 6 per cent.

In the early years of prostatic surgery, little was known of the effects of prostatic obstruction; no methods had been devised for measuring those effects, and no therapeutic means were available for obviating them. However, investigation has now re-

sulted in reliable tests of renal function, and experience has taught their application, so that more or less standardized methods have been devised for the more successful management of the patient with prostatic obstruction. Experience has also taught that the more modern adequate treatment of prostatic obstruction embraces more measures than simply surgical removal of the gland. As Bugbee has said, removal of the prostate gland is a mere incident in the treatment of prostatic obstruction.

Since prostatic obstruction occurs most commonly between the ages of 60 and 75, far beyond the average age for surgical conditions, the patient must be considered a substandard risk, not only by virtue of his age, but because of the cardiovascular changes coincident with that age and the renal insufficiency incident to urinary retention. Recognition of these conditions has led to methods of preparation enhancing the patient's physical and organic reserve, which lessen the risk of prostatectomy and reduce the mortality rate.

Belfield, in 1890, was the first to present a statistical review of the merits of radical surgical procedures for the elimination of prostatic obstruction. He reported a series of 133 radical operations by fifty surgeons, and determined their merits by comparing their mortality rates and end-results with those of palliative cystostomy. He furthermore estimated the merits of the perineal, suprapubic, and combined operations of prostatectomy by the same means. Perineal prostatotomy or prostatectomy had been performed in forty-one cases of this series with four deaths, a mortality rate of 9.7 per cent; suprapubic prostatectomy in eighty-eight with twelve deaths, a mortality rate of 13.6 per cent; and combined suprapubic and perineal operations in four with one death. Voluntary urination was restored by both perineal and suprapubic operations in 71 per cent of the cases. Unquestionably the average mortality rate following the perineal operation was lower in the early years of prostatectomy than that following the suprapubic operation. Numerous arguments have been presented since Belfield's original report, tending to set forth the advantages and disadvantages of the perineal and suprapubic operations. Isolated reports to the contrary notwithstanding, it appears from the present evidence that the average mortality rate following perineal prostatectomy until recent years was lower than that following the suprapubic operation, but an unprejudiced analysis of ultimate results and mortality rate following both perineal and suprapubic operations by those experienced in the respective methods shows that these factors can no longer be utilized to discredit one or the other method.

Gardner and Young, each an exponent of a different method, have shown that many consecutive operations may be performed without a surgical fatality. It is evident, then, that there are several methods of surgical removal of the prostate which are apparently productive of equally good results. The choice of method may therefore be based on the general condition of the patient, personal preferences, and the qualifications of the surgeon.

Cecil, Hinman, and Geraghty have aided in elimi-

† Read by invitation before the California Medical Association.

\* Verne C. Hunt (Mayo Clinic, Rochester, Minnesota). M. D. Rush Medical College, 1913. Practice limited to Surgery. Publications: About twenty-nine on various surgical subjects.

nating technical difficulties of the perineal operation, obviating injury to the rectum, and urinary incontinence. Bugbee, Judd, Gardner, and others have modified the suprapubic operation with enhancement of ultimate functional results.

It is uniformly agreed that drainage of the bladder as a preliminary step forms the keystone of the successful management of prostatic obstruction. In the evolution of suprapubic prostatectomy it was a common observation that patients who had survived simple cystostomy for retention or for removal of vesical calculi, and had recovered from the depression, subsequently underwent radical removal of the prostate gland with a relatively low mortality rate. This gave impetus to the adoption of the two-stage operation, which is still indispensable when there are associated vesical lesions, severe cystitis, marked renal insufficiency, senility, intolerance to urethral catheter, and similar conditions.

The two-stage operation is indicated in certain cases, but it is questionable whether it deserves routine adoption. The fact that drainage of the bladder is the important factor in preliminary treatment does not carry with it the obligation of cystostomy previous to prostatectomy, is attested by the favorable results of drainage by means of an indwelling urethral catheter. In my experience, intolerance to the urethral catheter when there are no associated vesical lesions, that is, calculi or diverticula, occurs in but approximately 6 per cent of cases. Cecil has reported one hundred cases in which urethral catheter drainage when necessary was an adequate preparation for perineal prostatectomy in all but six, in which suprapubic drainage was necessary preliminary to prostatectomy. Urethral catheter drainage, judiciously carried out in selected cases, limits the surgical procedure to one operation, and permits visible conduct of the operation and accurate hemostasis.

In 1783 cases in which suprapubic prostatectomy was performed at the Mayo Clinic between January, 1913, and January, 1925, vesical calculi were associated in 12 per cent, and surgical diverticula in 5 per cent. Cystitis is most marked in cases in which these lesions are associated, and it has been my experience that such severe cystitis is not readily amenable to drainage of the bladder by urethral catheter. Such cases are best treated by cystostomy, removal of calculi, or excision of diverticula at one stage, and removal of the prostate gland later. Prostatectomy, simultaneous with removal of vesical calculi and excision of large diverticula in the presence of marked cystitis, is accompanied by a higher mortality rate than the two-stage operation. Marked renal insufficiency, which obviously may require drainage of the bladder for several months before prostatectomy may be safely undertaken, often requires cystostomy to avoid a long period of hospitalization. In extreme senility (in the presence of low physical and organic reserve) the divided operation unquestionably is accompanied by the minimal risk.

It should not be inferred that preliminary cystostomy is without risk, for there is a certain risk, not because of the magnitude of the operation, but

because of the condition of the patient at the time. Aschner has reported a mortality rate as high as 47 per cent in seventeen cases treated only by cystostomy. The two-stage operation affords an apparently low mortality rate, as the deaths following cystostomy are not included in the mortality rate following prostatectomy. The one-stage operation following preparation in selected cases by urethral catheter has a high percentage applicability, as is shown by its use in 1346, or 75.4 per cent, of 1783 cases. The mortality rate following the two-stage operation when employed only in selected cases on the preceding indications is higher than when used as a routine procedure. This may be accounted for by the poor general condition of the patients selected for the two-stage operation, as compared to the condition of the patients prepared by urethral catheter drainage for the one-stage operation. A short period of time or a small series of cases will prove a contention for either method. However, a long period of time furnishes a more accurate perspective of the facts. Whereas, the average mortality rate following suprapubic prostatectomy at the Mayo Clinic for the twelve-year period from January, 1913, to January, 1925, was 5.5 per cent, ranging from 11 per cent in one year to 3 per cent in the later years, with a series of one hundred cases as low as 2 per cent, the average mortality rate following the two-stage operation was 7.3 per cent as compared to 4.8 per cent for the one-stage operation. Had the two-stage operation been employed as a routine in all cases the mortality rate following it would have been lowered, as the general condition of the patients selected for the one-stage operation was better.

Inasmuch as approximately 75 per cent of carefully selected patients may be satisfactorily prepared and operated on by the one-stage operation with relative safety, the diluent effect on mortality rate would seem an insufficient reason for employing the two-stage operation as a routine. However, whatever the various opinions regarding the one- or two-stage procedures, drainage of the bladder by urethral catheter or cystostomy allows recovery from renal insufficiency, stabilization of renal function, and decreases the stress on the cardiovascular system and respiratory apparatus. During the period of drainage preliminary to prostatectomy such therapeutic measures may be employed as required to increase the renal, cardiovascular, and pulmonary reserve.

#### FACTORS OF SAFETY

It has long been recognized that in all cases of prostatic obstruction with gross evidence of renal insufficiency and cardiovascular disease such preliminary treatment was necessary as would increase operability and decrease the operative risk. However, a recent review of all the prostatectomies performed at the Mayo Clinic during the last twelve years revealed that 658 patients (36.9 per cent) considered excellent surgical risks because of small amounts of residual urine, little or no renal insufficiency, and excellent general condition, were operated on without any preparation whatsoever. Thirty-seven and seven-tenths per cent of all deaths occurred in this group. Even though 437 (24.6 per cent) of the patients, because they were considered



the poorest surgical risks, were prepared by cystostomy on account of associated vesical lesions, marked renal insufficiency, and similar conditions, this group furnished but 30.7 per cent of the deaths.

The causes of death may be considered under three groups: (1) pre-existing organic disease: renal insufficiency, cardiovascular disease, and chronic pulmonary lesions; (2) surgical accidents: hemorrhage and shock; and (3) post-operative complications: pulmonary complications, general sepsis, embolism, and peritonitis.

Causes of death enumerated under Group 1 were responsible for 75.7 per cent of the deaths among the patients who had been considered the best risks and who had received no preliminary treatment, as compared to 45.4 per cent among those who had been considered the poorest surgical risks and who had been prepared by suprapubic cystostomy. These facts support an earlier contention that prostatectomy is never an emergency procedure, and leads me to assert that all patients require preliminary preparation by bladder drainage for at least ten days prior to prostatectomy, irrespective of an apparently high organic and physical reserve.

The fact that preparatory treatment bears a direct relationship to mortality from post-operative complications enumerated under Group 3 is shown in a consideration of the one cause of death, pulmonary embolism. Of the deaths during the last five years from post-operative complications, pulmonary embolism was the cause in thirteen cases (70.5 per cent). However, eight of the patients had been considered excellent surgical risks and had had no preliminary treatment, whereas three had had less than seven days' drainage of the bladder by urethral catheter. Eleven (84.6 per cent) of the patients dying from this cause had had no, or very little, preliminary treatment; one patient had had preliminary suprapubic cystostomy, and the other had had eighteen days of drainage by urethral catheter. This can hardly be regarded as a coincidence, but would lead to the deduction that preliminary preparation bears a direct relationship to the incidence of post-operative pulmonary embolism.

The chief causes of death attributed to surgical accidents are hemorrhage and shock. While deaths due to anesthesia are rarely reported, they unquestionably have occurred. Anesthesia, if not a direct, is a secondary or remote cause of death when inhalation types of anesthetics are used. The depressant effect of ether on the diseased kidneys has long been recognized, and various types of anesthetics have been recommended. Chute, Stirling, and many others have expounded the advantages of intraspinal anesthetics and have reported their successful use. However, until such time as measures can be devised to maintain the blood pressure during intraspinal anesthesia, it may hardly be considered the safest method. Sacral anesthesia, popularized in this country by Labat, Meeker, and Lowsley, possesses all the advantages of intraspinal anesthesia and none of the disadvantages of general anesthesia, and it is perfectly safe. During the last three years 95 per

cent of prostatic operations at the Mayo Clinic have been conducted under this type of anesthesia.

The greatest factor of safety, so far as surgical accidents are concerned, is accurate hemostasis. It has been accepted that a variable amount of bleeding may be unavoidable after prostatectomy. However, because a patient has prostatic obstruction it does not justify loss of blood during or after operation; neither can the patient stand unnecessary bleeding. The one-stage operation affords exposure, permits accurate visible conduct of the operation and complete hemostasis. Various hemostatic procedures have been resorted to, but experience with the Pilcher bag in over 500 cases proves that this is the most adequate method.

The one-stage suprapubic visible operation permits accurate removal of all obstructing portions of the prostate, excision of tags of mucous membrane, avoids injury to surrounding structures, insures against possible incontinence, and is accompanied by excellent functional results.

In a recent review of the results of 1313 suprapubic prostatectomies for benign prostatic hypertrophy performed at the Mayo Clinic, 54.12 per cent of the patients were relieved of all symptoms as a result of the operation; 25.28 per cent were markedly improved; 13.27 per cent were slightly improved; 4.49 per cent reported no change; and 2.82 per cent stated that their condition was worse. In other words, 92.67 per cent were improved by the operation. The patients who were but slightly improved, those who experienced no change, and those who were worse, had had urinary obstruction and retention for a long time before operation, irreparable damage to the kidney had occurred, and re-examination in a number of them has revealed a persistent and progressive pyelonephritis.

#### DISCUSSION

ANDERS PETERSON, M.D. (1136 West Sixth Street, Los Angeles)—I want to express my appreciation of the vast amount of work Doctor Hunt has done in reviewing this large series of cases of prostatectomies.

Offhand I think this is the largest group of cases ever presented by one clinic, and the cases are selected over a space of time since the improved methods of preparation, as well as surgical technique, have been utilized. Hence, the deductions made should express very nearly the true results of this operation.

As the matter of choice, whether a suprapubic or perineal route is employed, does no longer center around the size or consistency of the gland to be removed, but depends rather upon the training of the surgeon (it seems that no surgeon has yet developed himself to perfection in both methods) if the end-results are equal by either method, this alone explains the continuance of both types of operation.

For the purpose of preparation, I like to think of prostates in four classes:

In the first group I place those in patients of the early sixties, with a moderate amount of residual urine, adequate kidney function, and general condition otherwise good. Here intermittent catheterization over a period long enough to establish the fact that no reaction is produced by this manipulation should be carried out.

In the second class of patients I would place those with fairly large amounts of residual urine, where infection was developed with the associated general depression. Here intermittent catheterization is carried out for a reasonable period, and the permanent catheter drainage is instituted until the condition is favorable for prostatectomy.

In the third group fall those patients in whom inter-

mittent catheterization followed by permanent catheter drainage fails to produce satisfactory conditions for prostatectomy; suprapubic cystotomy under local or sacral anesthesia is for them the operation of choice.

In the fourth group are patients with acute retention, where catheterization is very difficult or impossible, and where severe bleeding has occurred. A suprapubic cystotomy becomes essential at once.

Hunt's warning that it is unsafe to operate upon any patient without a period of catheterization, even in the apparently most favorable subjects, I think is a rule that should be followed.

GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles) — In reviewing the subject of suprapubic prostatectomy, as discussed by Doctor Hunt, I feel that in general his view is sound, but there are certain statements which my experience would lead me to differ with or to modify.

In the first place, he says "it should not be inferred that preliminary cystostomy is without risk." If one does a preliminary cystostomy instead of a preliminary cystotomy, there should be no appreciable risk, if this is done properly and measures are taken to protect the loose fascia which fills the space between the bladder wall and the anterior wall of the abdomen, so there cannot be any contamination or infection of the pelvic fascia. With this removed, all risk from the operation should be less than one-tenth of one per cent.

The value of the two-stage operation in suprapubic prostatectomy is not to be estimated by the mortality rate prevailing in a well-equipped surgical infirmary where only skillful operators are allowed to do the operating, but rather by the results obtained by the average urologist or by the general surgeon doing all the urological work which presents itself to him, and under these conditions I am sure it will be found that the routine two-stage operation will be followed by a much lower mortality rate than where it is employed only in the most desperate cases.

In estimating the factors of safety in prostatectomies, it is well not to be misled by the appearance of healthfulness of the individual who applies for relief. It is unwise to say "we will take this man and remove his prostate without any previous preparation, because he has a normal phthalein output, there is no pus in his urine, the amount of his residual is not large, his heart is sound, his blood chemistry is satisfactory, therefore nothing can happen to him." Something can happen to these people, and something does happen to a sufficient number of them to make the thoughtful and considerate operator very wary. Conditions so full of promise always arouse suspicions in my mind that I may lose the man, because it seems impossible to do so. Men at the age when they require prostatectomies are never entirely well. Their muscular system, blood-vessels, nervous system, and their kidney function all may seem excellent, but may not be able to stand a sudden strain or an increased load. To do a suprapubic prostatectomy in two stages is certainly a safer operation for the patient, but not by any means so convenient a one for the operator.

When Hunt says that all patients require preliminary preparation for prostatectomy by bladder drainage for at least ten days prior to prostatectomy, he is stating a fact, and if suprapubic prostatectomy has been determined upon, I aver that it is more satisfactory to do that drainage by means of a properly performed suprapubic cystotomy, which is innocuous and does not complicate the subsequent removal of the prostate, for if it is desirable that the entire vesical neck should be seen by the operator, this can be accomplished in an entirely satisfactory way by using a transverse incision for the preliminary cystotomy and obtaining the subsequent necessary exposure by a longitudinal central incision from the base line of the transverse cut up as far as desired toward the umbilicus, a method of approach to the bladder which I have named the aeroplane incision.

In a resumé of the results of the 1313 suprapubic prostatectomies Hunt finds that 50 per cent were relieved of all symptoms as a result of the operation; 25 to 28 per cent were markedly improved; 13.27 per cent were slightly improved; 4.49 per cent reported no change; 2.82 per cent stated that their condition was worse. I have

watched Hunt operate and I know that he has great skill, but if this report is correct it is not one to be proud of. To have thirteen survivors out of every hundred persons undergoing a grave surgical operation, with only a slight improvement of the condition for which they were operated—4½ per cent no better and 3 per cent worse—in a great clinic where every facility is present for the care of these patients, looks to me as if the patent obstructions had been removed from the bladder and bladder neck but the concealed ones in the anterior prostatic urethra or the perineal or phallic parts of the urethra had been overlooked in the examination made before the individuals came to operations. A persistent pyonephritis will account for the continuous appearance of pus in the bladder following prostatectomy, but it will not prevent the individual from emptying his bladder.

I agree entirely in the matter of there being but little choice in the modern methods of prostatectomy, and that the item of greatest importance is the general management both before and after the operation.

DOCTOR HUNT (closing)—I wish to express my appreciation of the discussions by Doctor MacGowan and Doctor Peterson. Everyone engaged in this type of work recognizes the hazards by virtue of the age of these patients, the associated organic lesions of that age, and those incident to prostatic obstruction, and quite universal agreement exists regarding the necessity for stabilization of organic and physical reserve by preoperative treatment. The type of patient who submits himself for operative relief, the amount of renal insufficiency, instability of organic reserve, and the conditions under which the surgeon works, influence to a large extent the manner in which these patients may be satisfactorily prepared for prostatectomy.

I have reference to the difference of opinion which exists regarding the cystostomy or cystostomy method of draining the bladder preliminary to prostatectomy as opposed to the permanent indwelling urethral catheter method facilitating the one-stage prostatectomy. There are many advocates of the two-stage suprapubic operation who support their preference by low mortality rate and good ultimate functional results, and I quite agree with Doctor MacGowan in his statement that the routine two-stage operation will have a much lower mortality rate than where it is employed in the most desperate cases. However, in the routine two-stage operation, the relatively higher mortality rate in the desperate cases is diluted by the low mortality rate in those patients considered as good surgical risks. In my experience this latter group of patients, comprising 75 per cent of the total, can be operated upon by the one-stage operation after adequate urethral catheter drainage and preparation, with a mortality rate as low as with the two-stage procedure.

Regarding the results of suprapubic prostatectomy, I wish to state that these are accurate determined results in 1313 patients. These results are obtained by careful personal investigation and not from general impressions or the evidence of an occasional patient. They are determined in terms of frequency, difficulty, pain, and ability to empty the bladder completely. When I speak of complete relief of all symptoms in 54 per cent plus, marked improvement in symptoms in 25 per cent plus, slight improvement in 13 per cent plus, the patient's idea of the result obtained is expressed, whereas the surgeon's idea of a good result may be based entirely on the re-establishment of voluntary urethral urination resulting in complete emptying of the bladder after removal of the obstructing prostate, with which he may be satisfied. The incidence of failure of obtaining such a result after the one-stage visualized suprapubic prostatectomy is entirely negligible. Other factors than removal of the obstruction in the prostatic urethra and vesical neck, even though the result of prolonged obstruction or associated with the obstruction, enter into determination of ultimate results. A persistent pyelonephritis may account for continued frequency, and while the obstruction at the bladder neck may be removed with complete voluntary emptying of the bladder, nevertheless the continued frequency will not allow the patient to admit a good result as liberally as the surgeon who finds no residual urine after prostatectomy.

I wish to emphasize that 90.2 per cent plus of the pa-



tients, after suprapubic prostatectomy, in whom results could be accurately determined have been entirely relieved from all symptoms or improved. After a critical review where any question existed regarding the amount of benefit the patient received, the advantage was given the patient and not to the surgeon or the operation.

### PATHOLOGY OF SENSIBILITY†

By B. BROUWER\*

(Department of Neuropsychiatry, University of Amsterdam)

**P**ATHOLOGY of sensibility is one of the chief means used in diagnosing and localizing diseases of the nervous system. Important work in this field of study has been done by Head and his co-workers in England. I take for granted that you know Head's work, hence I shall only refer to the principal points. In his conception there are three systems by which stimuli for sensibility are caught up in the periphery. The first is deep sensibility, which originates chiefly in the muscles and in the joints. By this, impulses produced by pressure and by movements are conducted to the central nervous system. The other two systems conduct stimuli caught in the skin and in the subcutaneous tissue. These systems are the protopathic and the epicritic. The former responds to painful cutaneous stimuli and to the extremes of heat and cold. The latter, the epicritic sensibility, serves for light touch, for discrimination of two points and for appreciation of the finer degrees of temperature.

In co-operation with Doctor Schoondermark I examined at Amsterdam many lesions of the peripheral nerves in man. We have seen many of the facts described by Head. Our investigations, however, did not convince us that the theory of the existence of two distinct pathways for protopathic and epicritic sensibility has yet been proved. But we felt that this work is a great advance in science, especially because phylogenetical ideas have been introduced into the doctrine of clinical sensibility and that autonomic sensibility has been brought to the foreground.

The centripetal side of the autonomic nervous system has not been so clearly analyzed as was the centrifugal by Gaskell, Langley, and others. But still we know sufficient facts to work with in physiology and in clinical examinations. In my opinion several sensory stimuli are brought from the surface of the body to the central nervous system along sympathetic fibers.

All the sensory stimuli caught in the periphery of the body are sent to the spinal cord and to the brain. For a better understanding of the matter we shall limit ourselves to the spinal cord. The same line of thought may be followed concerning sensibility of the head which is conveyed to the oblongata by the trigeminal nerve.

The sensory impulses reach the intervertebral ganglions and then proceed through the posterior roots. Here in America Ranson found that there are many unmyelinated fibers in the posterior roots. He believes that these conduct the protopathic sensibility of Head.

In the spinal cord these stimuli proceed along two separated systems. One group reaches the gray substance of the same side, and here the first sensory neuron ends. A new neuron issues in the cells of the posterior horns. It mostly crosses and proceeds upward in the anterolateral part of the spinal cord. This system comprises the stimuli for pain, heat and cold and a part of tactile sensibility. The other group avoids the gray substances and ascends in the posterior column of the same side. It ends in the nuclei of Goll and Burdach, which lie at the upper border of the spinal cord. Here it is that the second sensory neuron begins, crosses in the oblongata and ascends to the optic thalamus. These sensory pathways in the posterior columns of the spinal cord conduct stimuli of deep sensibility and a part of the tactile impulses. All these sensory stimuli are sent upward to the optic thalamus, and from there to the cortex of the brain and are there associated with many stimuli of different qualities.

Many investigators consider the sensibility of the posterior columns as a higher form. It enables us to recognize the shape and size of the objects and to distinguish two points applied simultaneously. The other form serves more for feeling and is more vital, while the former is more intellectual in character. Hence they are opposed to one another and are called the gnostic and the vital sensibility. The fact that the sensory functions of the posterior columns are regarded as a higher form of sensibility has led me to make a study of the development of these sensory systems in the scale of evolution. In the lowest classes of vertebrates, in fishes, the system of vital sensibility is present. The posterior columns, however, are very small here and contain only fibers connecting the different levels of the spinal cord. They have no nuclei of Goll and Burdach and no frontal trigeminal nucleus. These animals have only this vital sensibility, which we may call the palaeotype of sensibility. As soon, however, in the scale of evolution, as life on land has become possible, new demands are made on sensibility. Thus a new pathway is formed. This is the system which we called above gnostic sensibility. In lower animals, for example, in reptiles and in birds, this second pathway is still small, but in the ascending scale it grows and is greatest in man. We called this the younger form of sensibility, the neosensibility. Investigations, made in co-operation with Doctor Zeehandelaar, taught that in the human development the same relation is seen. So it seemed correct that this neosensibility corresponds with the above mentioned higher form of sensibility. These recent investigations, however, have shown that the palaeosensibility does not remain the same during evolution. Just as is so often seen in the central nervous system, the old parts develop further and are more finely organized in higher animals and in men. The posterior horn of the spinal cord in reptiles and in birds is

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\* B. Brouwer (Amsterdam, Holland, Heerengracht 569). M. D. University of Amsterdam, 1906. Graduate Study: Internship University Hospital, Amsterdam. Previous Honors: Vice-Director of the Central Institute for Brain Research, Amsterdam. Present Hospital Connections: University Hospital, Binnen Gasthuis, Amsterdam. Scientific Organizations: Member of the Medical Faculty University of Amsterdam; Member of Royal Academy of Science, Amsterdam. Present Appointments: Professor for Neuropathology; Head of Department for Neuropathology (Clinic for Nervous Diseases). Practice limited to Nervous Diseases since 1911.

of a much simpler build than in man, and the substantia gelatinosa Rolandi, for instance, is not present there (Ariens Kappers). Hence I believe it is not correct, at the present stage of science, to speak of a higher form of sensibility which is conducted in the posterior columns and of a lower form which is conducted in the anterolateral columns. In my opinion the chief difference between these two forms of sensory pathways is the following: The so-called vital sensibility is closely connected with autonomic functions, and, as I mentioned already, much of it is brought to the central nervous system by non-medullated fibers. At all events, it is associated in the gray substance with sympathetic centers and there causes, among other things, reflex movements in the sympathetic area. The other form of sensibility avoids the gray substance. It sends collaterals to this part of the spinal cord, but does not terminate there. These impulses sent in the direction of the cortex do not originate in the autonomic nervous system and are not associated with it. They should be called nonautonomic. The stimuli for vital sensibility cause on a high level of the brain sensory feelings. The nonautonomic system conduct impulses for gnostic sensory functions, which at a high level of the brain may cause sensory observations but no sensory feelings.

It is clear that both these forms of sensibility always work together in the cortex cerebri and that they constantly interact. It is this constant separate co-operation that enables us to form ideas of the outer world, insofar as this is possible by sensory stimuli.

It is clear that an exact knowledge of the organization of sensibility helps greatly to localize pathological processes in the brain and in the spinal cord. From all the clinical pathological syndromes, I shall take tumors of the spinal cords as an example, because these form a part of neurology, where biological research and practical application co-operate to obtain therapeutical results. These tumors of the spinal cord may cause disorders of motility, of sensibility, and of autonomic functions. The state of these disturbances depends on the level of the tumor in the spinal cord. Above all, the disturbances of sensibility enable us to localize the exact level of a tumor. The doctrine of the segmental anatomy has made it possible to do this. The part of the skin which is innervated by a segmental root is called a dermatome. There are several schemes indicating how these dermatomes are distributed. In Holland we always use Bolk's diagrams.

The principle of segmentation in the spinal cord is clearest in vital sensibility. In syringomyelia, for example, a disease in which a tumor chiefly grows in the gray substance, there are among other things analgesic areas in the skin, which may show the same form as the dermatomes.

There are also affections in which only gnostic, nonautonomic sensibility suffers. A good example of this is pernicious anemia. In the early stages of the disease we may see disturbances of deep sensibility and of finer touch in the legs, the other sensory functions being normal. In tumors which press on the outside of the spinal cord the disturbances

of sensibility vary greatly. To localize the exact level of the tumors we regularly use the schemes of the diagrams. So it seems to be simple to localize tumors of the spinal cord and to send them with a correct diagnosis to the surgeon. But experience teaches that this is not so easy. Not infrequently the spine is opened and no tumor is found. One of the chief causes of this is that there is an overlap between several dermatomes.

Diagnosing the exact level of tumors in the spinal cord has lately been greatly helped by the discovery of Sicard and Forestier. After suboccipital puncture lipiodol is injected and an ex-ray examination of the spine is made. Where an extra-medullar tumor is present, the lipiodol stops, gives a shadow on this part of the spine, and thus we are able to control our clinical conclusions. We have done much lipiodol work in my clinic. In 1925 tumors were successfully removed by the surgeon (Professor Lanz) after the clinical examination had been verified by lipiodol tests. In my opinion the lipiodol test must be done when the clinical examination has led to the diagnosis of a tumor of the spinal cord.

Demonstration of diagrams and slides.

## BIRTH INJURIES FROM AN OBSTETRIC STANDPOINT

By FREDERIC M. LOOMIS \*

*An editorial adviser in evaluating this paper for the editor states, in urging its acceptance and publication, that "it is one of the best essays on the subject that I have read. I only hope that all readers may get as much useful information from the printed copy as I received from reading the unusually clean and well-edited manuscript."*

*One of the discussants in a separate letter to the editor writes: "This article is interesting as well as instructive to me, and I believe that it is of the kind that helps to make CALIFORNIA AND WESTERN MEDICINE worth while."*—EDITOR.

*Intracranial hemorrhage is the most frequent birth injury, the most dangerous, and the least often diagnosed.*

*Premature infants, in spite of the greater ease of delivery, are much more subject to intracranial injury than those at full term.*

*Breech deliveries are, in proportion, much more likely to result in intracranial injury than vertex presentations.*

*A large proportion of intracranial injuries (up to 25 per cent) occur in normal deliveries.*

*Forceps deliveries are a large but uncertain factor.*

*The relation of mental defects in later life to injuries at birth is much argued but still unsettled.*

DISCUSSION by Alfred Baker Spalding, San Francisco; L. A. Emge, San Francisco; Edgar Brigham, Dinuba, California.

**F**ORTUNATELY no one of us can relate as personal experience a very large number of definite birth injuries, and a presentation of the subject must necessarily consist largely of the findings of many. However, one cannot review recent work on this subject without being convinced that we have unconsciously made "asphyxia neonatorum" on death certificates cover so many things that the term is now no more accurate than is "heart failure" as a cause of death.

In England, Germany, and this country in the

\* Frederic M. Loomis (350 Twenty-ninth Street, Oakland, California). M. D. University of Michigan. Practice limited to Obstetrics and Gynecology. Hospital connections: Merritt Hospital, Oakland.



past three or four years very large statistics have appeared covering thousands of autopsies and scores of thousands of births. The outstanding facts are:

1. Intracranial hemorrhage is the most frequent birth injury, the most dangerous, and the least often diagnosed.
2. Premature infants, in spite of the greater ease of delivery, are much more subject to intracranial injury than those at full term.
3. Breech deliveries are, in proportion, much more likely to result in intracranial injury than vertex presentations.
4. A large proportion of intracranial injuries (up to 25 per cent) occur in normal deliveries.
5. Forceps deliveries are a large but uncertain factor.
6. The relation of mental defects in later life to injuries at birth is much argued but still unsettled.

In this country Ehrenfest (1922) in an exhaustive monograph first attempted to collect and interpret the facts, and has continued to draw attention to the importance of this subject. Fortunately for us he writes from the standpoint of the trained obstetrician, and I quote frequently from him. Sharpe, writing rather from the neurologic standpoint, has made important contributions, the most recent one covering four series, with one hundred consecutive births in each.

It will be remembered that the pia, the innermost meningeal layer, follows the contour of the brain substance closely; that the arachnoid covers the brain much more loosely; and that the dura is the heavy outside layer. The falx cerebri is the direct extension of the dura, dividing the two cerebral hemispheres, sickle-shaped, and itself dividing behind to form the tentorium—a broad shelf which separates the cerebrum and cerebellum. The juncture of the falx and tentorium is now accepted as the weakest point in this structure, and it is here that a large per cent of the injuries take place, the resulting hemorrhage coming from the veins along the free edges of the structures.

The "great adventure" of everyone's life is evidently at the moment of his entrance into it. If infant heads were not plastic, few first-borns would survive the passage through the pelvis, and we recognize moulding as a physiologic adaptation of the passenger to the passage. Moulding is made possible by the membranous sutures of the fetal skull, by the open fontanelles and by the overriding of the bones to permit the necessary shortening of diameters. However, lateral shortening of the fetal head is accompanied by longitudinal lengthening exactly as the long diameter of a toy balloon is increased by squeezing it laterally. It now seems that it is the specific function of the falx and tentorial fibers to prevent undue lengthening of the fetal head, and that forcible or more particularly sudden (this word is emphasized by nearly every writer) lateral compression, with its compensatory lengthening, beyond the margin of strength of these fibers, results in rupture and frequently though not always in hemorrhage. The other contributors to this symposium are to discuss the pathology, symptoms, and treatment of intracranial injury, but the obstetricians are primarily concerned in its mechanics from a standpoint of prevention. Holland in the *British Medical Journal* finds, from a large series of autopsies, that 51 per cent of fetal deaths result from complications of labor. We spend anxious months conserving the welfare of mother and fetus before delivery and then lose the baby in a moment of "de-

lirium operatorium," a clever phrase of DeLee's, which he describes as an "acute lapse of operative reason which may affect the accoucheur after much loss of sleep, the nervous wear of a prolonged labor, the exactions of the family, combined with the sudden appearance of extraordinary difficulties."

Writers are agreed that excessive moulding is the most frequent cause of intracranial injury, and it is constantly pointed out that increased intracranial pressure and intracranial congestion are attendant factors. It is believed that these conditions result in the depression of the respiratory center to such an extent that no amount of stimulation is effective. Every obstetrician knows that the newborn's heart frequently continues to beat for a long time even when there is no respiratory impulse whatever. I have long believed that "asphyxiated" babies were usually overstimulated, have long since abandoned the hot and cold tubs, vigorous slapping, etc., and have instead immediately put the child into hot blankets, cleared the throat with a tracheal catheter (which is easily made, like a wash bottle, and should be kept in every delivery-room) and have then kept up direct mouth-to-mouth inflation, through gauze, as long as necessary. The children we save in this way are suffering from respiratory depression rather than from hemorrhage. At this stage we have no way of diagnosing intracranial hemorrhage, as no one would consider doing a lumbar puncture in the first few moments of a child's life, and would in all probability increase the hemorrhage by relief from pressure if he did.

I am quite sure that we cannot influence the size of a child's head by the mother's diet during pregnancy, although I think we do succeed in lessening its total weight, and I am certain that by reducing her carbohydrate diet she will be in better condition to help us in her delivery and will be much more pleasing to herself and to her friends, with a reasonably good figure instead of a fat one, with the sagging and looseness of the skin that follows when the fat is finally reduced. We can, too, avoid some of our "impasses" by more careful judgment and measurements in the border-line pelvis, considering the father's stature as well as the mother's, and in particular watching for funnel pelvises. There are a surprising number of men who carefully measure the inlet, but neither measure nor estimate the outlet, and then find themselves with an almost impossible delivery so late in the second stage that they cannot consider Cesarean section, but must proceed with a difficult and forceful forceps delivery, with great damage to the mother and often the loss of the child. It frequently happens that we find the worst outlet contractions in women of the finest general physique, and yet this is what might be expected, since these women are structurally of the male type. These patients should be delivered through the abdomen, especially if they are past 30 or 35 and have the exceedingly heavy, unyielding masculine perineal muscles so common to their type. There has been so much criticism of the "epidemic of Cesareans" that it sometimes takes much courage to advise one, though in the light of our present knowledge of intracranial injuries it would be hard to devise a more severe test for a fetal head than a typical funnel pelvis.

The most common cause of pressure distortion of

the fetal head is posterior position. There are too many posteriors which do not rotate spontaneously, and we finally have a more or less exhausted patient, with diminishingly effective pains and no progress, and there are too many physicians still practicing obstetrics who meet this situation by "going after it" with nothing but a brave heart and a heavy hand. It is almost an insult to a group of medical readers to remind them that the pressure of extraction is greatly reduced by proper rotation; that the forceps handles should be so separated by a heavy sponge or towel that they cannot be squeezed, with consequent squeezing of the head; that forceps deliveries should be slow and deliberate, with a studied gentleness. But every one of these elemental principles is constantly violated. A multiplicity of remedies for a disease is clear evidence that no one has found the complete answer, and the number of papers written each year on the management of posterior positions is suggestive of a like predicament, not to mention those lofty souls who disdain any management except the selection of a solid place to brace their feet.

The Kjelland forceps will solve this problem to a large degree for some operators, version perhaps for a few, and manual rotation for others. For several years I have used manual rotation in difficult cases where interference seemed necessary—rotation of the entire fetus 180 degrees, not of the head alone. In this maneuver, with the patient fully anesthetized, the left hand, in right posteriors, is inserted past the fetal head till the middle finger reaches the child's right axilla, deeply posterior, the head being slightly displaced upward. With the help of the other hand on the outside, the entire fetus is rotated with surprising ease to an OLA position—not just to ORA, from which it is likely to slip back—and as the hand is withdrawn, firm pressure on the fundus by an assistant fixes the head in its new position firmly till mid-forceps can be applied. There are several objections to this proceeding, such as the invasion of the lower uterine segment by the hand and prolapse of the cord; but I have used it, after careful preparation, scores of times and have not yet regretted it. I am at least absolutely sure of the position of the head and of the correct position for the blades, and am conscious that the pressure is reduced to a minimum. I believe that under good hospital conditions and with due care, it is safer to risk thorough internal examination than to attempt a difficult delivery on the insecure diagnosis afforded by a short length of sagittal suture felt through a heavy caput, and a fontanelle that can be barely reached.

Recent reports of autopsies reveal a severe indictment of breech deliveries, or of versions followed by extraction. Holland reports tears of the septa formed by the dura in 81 out of 167 fetuses dying during labor; 35 of the 81 were breech or version cases. H. Saenger, in 100 autopsies of the newborn, reports 23 breech cases, and of these, 20 had tentorial tears and 22 had intracranial hemorrhage. Cruickshank reports autopsies on 400 newborn, 200 of which were at term and 200 premature. In 50 per cent of the mature infants and 40 per cent of the prematures there had been gross intracranial hemorrhage, but more surprising is the fact that

breech delivery had occurred in 47 per cent of the mature cases, and 52 per cent of the premature cases showing tentorial laceration. This can mean only one thing, i. e., that forced breech or hurried breech delivery is about the most dangerous known proceeding for the fetus. The extremely high percentage of tentorial tears and hemorrhage argues against simple asphyxia from compression of the cord as a cause of death in breech extraction, and consequently against the need of excessive haste in delivering the after-coming head. Whatever we may think of the Potter version as a routine, we must consider Doctor Potter with consistently warning against too much speed, and when we realize that the greater danger lies in the intracranial injury which is sure to follow force from below, we shall worry less perhaps about the time limit for compression of the cord. Thorough preparation of the vaginal floor or adequate episiotomy will protect us to a large extent against these dangers in our necessary breech deliveries, and careful consideration of possible flatness of the pelvis or of a high sacral promontory will help us avoid the tragedies of some of the elective ones. A minor point, but one worth remembering, is advanced by several German writers and reviewed by Ehrenfest in warning against bending the cervical and thoracic vertebral column *backward* in making traction on the after-coming head. It is pointed out that the natural attitude of the fetus is flexion and that the newborn vertebral column is better adapted to flexion than to extension; consequently, such traction as must be made should be made toward flexion instead of toward extension of the column, avoiding any attempt to "save the perineum" by bending the body of the fetus over the mother's abdomen.

I have left but little space for the better known birth injuries, such as facial and brachial paralysis, fractures and dislocations. These are not all due to the heavy hand of haste or inexperience, by any means, but sometimes occur in normal unaided deliveries, and in rare instances are justified if deliberately made. Excessive bending of the delivered head up or down to facilitate the delivery of a shoulder, hooking the finger in the axilla to pull down a shoulder forcibly, or into a bended elbow to bring down a forearm, pulling forward an arm by the hand instead of "splinting" it out by the finger of the operator pressing against it, lateral traction on the after-coming head, pressure of the fingers in the Smellie-Veit method into the space back of the clavicle traversed by the brachial plexus instead of bridging over or avoiding that area altogether—all these and many more we must keep in mind instinctively if we are to avoid injuries, but most of all we must be on our guard against the panic of the moment which impels needless hurry.

There will, I suppose, always be cases in which interference is not only justified but demanded by every consideration of humanity. The use of high forceps is fortunately almost obsolete, but mid and low forceps correctly decided upon and deliberately and skilfully used are operations of increasing safety as our hospital conditions improve, and the more we recognize the dangers of interference, and the more we learn how to avoid these dangers, the more true will become Barnes' epigram that we should



wait only to see what a woman can accomplish, not what she can endure.

#### DISCUSSION

ALFRED BAKER SPALDING, M. D. (Stanford Hospital, San Francisco)—Doctor Loomis has covered the subject of birth injuries from an obstetrical standpoint so well that in discussing his paper one finds very little to criticize and not much more to add. I agree with Loomis that we all have probably had more experience with birth injuries than we realize, unless routine autopsies have been made upon newborn babies dying from asphyxia. I thoroughly agree with Loomis that it is the sudden extraction or the sudden relaxation of pressure from the baby's head that usually causes damage. Such injuries may even occur with Cesarean section. With one of my patients suffering with fibroids of the uterus and eclampsia, the baby suffered from secondary asphyxia, and the autopsy showed hemorrhage of the brain.

I believe the more frequent use of the cervix bag will help in limiting the number of these injuries, as the cervix at times very tightly grips the baby's head, and probably constriction not infrequently results in birth injuries. Also I have found the Kjelland forceps seem to have been of distinct assistance in preventing cranial injuries associated with forceps delivery.

I finally wish to agree with Loomis that the more frequent resort to median episiotomy will probably lessen the number of cranial injuries.

L. A. EMGE, M. D. (350 Post Street, San Francisco)—Doctor Loomis deserves fulsome praise for this very timely and important discussion of birth injuries. I agree with Spalding that the salient points have been covered so well that little remains to be added. May I say that occiput posterior positions occur with much greater frequency than is generally believed. Only too often examinations during the first stage of labor are neglected or left to the unsuspecting intern. Consequently, many labors are unduly prolonged and recognition of the course is overlooked by virtue of nature's act in spontaneously rotating the head to a more favorable position. It is during this period of greatest pressure that cranial injuries take place. Since the event of Gwathmey's method of rectal anesthesia I have noticed that the conversion of posterior into anterior positions occurs more rapidly and with much less pain to the mother. Perhaps it is because the force and speed of uterine contractions are slowed up, dilatation of the cervix takes place more rapidly, and the posterior segment of the levator-ani muscles is less resistant. In any event, since I have employed this method of anesthesia I have been less often forced to resort to manual or instrumental rotation of the head. There is no doubt in my mind that the type of manual rotation practiced by Loomis is superior to the conventional method, because it prevents sudden torsion of the cervical spine and cord. I also agree with Spalding that the judicious use of cervix bags will greatly aid in preventing cervical injuries. May I say in concluding that I believe selective Cesarean section, especially the low type, is far more preferable to a breech extraction of a normal size baby through a mildly contracted pelvis, provided that the surgical technique of the attendant and proper hospital surroundings warrant such an undertaking.

EDGAR BRIGHAM, M. D. (Dinuba, California)—I am sure that one of the great causes of brain injuries during delivery is sudden compression on the head or sudden release of pressure. This applies to spontaneous as well as to all forms of artificial deliveries. In some women who have spasmodic, almost overmastering, pains, I believe it is very important to enlist their co-operation in regulating the voluntary force, aiding them with sufficient anesthetic.

As stated by Emge, I find that the synergistic method of analgesia is a decided aid in converting a posterior to an anterior position. In difficult cases the manual rotation as practiced and described by Loomis should do all he claims.

Recently I delivered a small mother whose measurements, both inlet and outlet, were on the extreme border line. Great care was used in applying median forceps

(axis-traction type), and the pressure was applied and released gradually in simulating labor efforts. By doing an episiotomy the child was delivered from a ROP position without internal or external head injuries. With Emge, however, I believe that Cesarean section is the safest for the child and less traumatizing to the mother in posterior positions coupled with moderate contraction of the pelvis.

Doctor Loomis has presented this subject in a very interesting and thought-provoking manner. His contribution should spur us to closer observation and more careful technique in preventing birth injuries.

#### RECURRENT TOXEMIA OF PREGNANCY

By HANS VON GELDERN \*

*A large proportion of pregnancy toxemias recur in subsequent pregnancies, and over one-fourth of these are complicated by chronic nephritis.*

*It is essential to segregate the chronic nephritic patients from this group because they invariably have a poor prognosis.*

*Kidney function tests will aid not only in making this differentiation, but will assist in determining the prognosis in future pregnancies.*

*The ultimate outcome of the patients with recurrent toxemia is doubtful, but carefully planned prenatal care, with the aid of kidney function tests and good judgment as to the time to terminate pregnancy, will carry through at least 75 per cent satisfactorily.*

*The urgent need of systematic follow-up work between pregnancies is recognized.*

DISCUSSION by Frank Ainley, Los Angeles; Alfred B. Spalding, San Francisco.

**A**FTER recovery from a severe toxemia the question is raised whether it will recur in the event of a future pregnancy. Lepage, in a series of thirty-eight hospital patients suffering from toxemia of pregnancy, found that 21 per cent had recurrences in subsequent pregnancies. Records of the toxemias at the Johns Hopkins Hospital show about the same percentage.

Slemons reported eighteen private patients who had subsequent pregnancies, only three of whom had toxemia with each pregnancy, while the others showed no further evidence of toxemia. From observations made upon toxic patients with albuminuria, Slemons concluded that a reduction of albumin to a faint trace, in the course of a week following delivery, was to be regarded as a favorable prognostic indication, while a measurable amount, persisting over six to eight weeks, was evidence of damaged kidneys and an unfavorable sign for future pregnancies. An albuminuria lasting over a period of three to four weeks he regarded as a more doubtful prognostic sign. In studying the blood pressure in twenty patients, Slemons and Goldsborough found that in 75 per cent the blood pressure was normal in two weeks, indicating that no renal lesion was present, whereas in 15 per cent, clinically diagnosed as nephritis, hypertension lasted eight weeks postpartum. In two patients, or 10 per cent, the blood pressure remained elevated for one month, indicating a doubtful prognosis.

Bunzel, by means of a "Toxic Follow-Up Clinic," interviewed sixty patients who were either pregnant when seen or had been pregnant since their discharge from the hospital. Thirty-one of these

\* Hans von Geldern (516 Sutter Street, San Francisco). Stanford University, June, 1920. Practice limited to Obstetrics and Gynecology. Hospital Connections: Stanford University Hospital. Appointments: Clinical Instructor, Obstetrics and Gynecology, Stanford University.

again showed signs of toxemia, while twenty-nine did not.

Harris had the opportunity to follow up 111 patients admitted to the obstetrical service of the Johns Hopkins Hospital. Each patient returned after one year, and was studied with particular reference to the existence of renal disease. He classified the toxemias in his series into four groups, namely, eclampsia, pre-eclamptic toxemia, nephritic toxemia with convulsions, and nephritic toxemia without convulsions. Eleven per cent of the eclamptic patients who returned for study showed evidence of chronic nephritis, and about  $7\frac{1}{2}$  per cent had subsequent pregnancies complicated by nephritis. Harris concluded that in these patients chronic nephritis developed following eclampsia and probably resulted from it. In no subsequent pregnancy of this group did the symptoms of eclampsia reappear. Sixty per cent of the pre-eclamptic patients who returned showed evidence of chronic nephritis, nephritic toxemia occurring in all subsequent pregnancies. Those patients who were normal at the end of one year showed no evidence of toxemia in subsequent pregnancies. These facts tend to indicate that the ultimate outcome in patients recovering from eclampsia is more favorable than in pre-eclamptic toxemia, a condition which Harris is unable to explain. Many of these so-called pre-eclamptic patients must evidently have belonged to a mild or unrecognized chronic nephritic group before the onset of pregnancy. All of the members of the nephritic groups having subsequent pregnancies had nephritic toxemia. The time of onset in Harris' series is significant. In the eclamptic group the average onset was one week prior to delivery, in the pre-eclamptic patients one month, while in the nephritic groups symptoms began before the last month of pregnancy. This would indicate that the length of time the toxemic symptoms have persisted is a factor in determining the presence of permanent kidney damage and gives us a clue as to the ultimate prognosis.

Kellogg noted observations derived from 400 consecutive toxemia records of the Boston Lying-in Hospital, from forty-one private patients and from autopsies. He noticed that there was a great group of patients who, though showing no clinical manifestations of chronic nephritis when not pregnant, nevertheless in subsequent pregnancies showed evidence of kidney insufficiency or toxic symptoms, and to this group he tentatively gave the name "recurrent toxemia of pregnancy." Members of this group have undoubtedly been classed by various observers among the nephritic toxemias. By instituting thorough prenatal care, Kellogg was able to carry patients in this class through their pregnancies without showing signs of kidney insufficiency. However, there were certain of these patients in whom, in spite of the best possible prenatal care, toxemia occurred and persisted. Kellogg considered recurrent toxemia as a clinical entity, further basing his idea on the autopsy findings of two cases who showed the acute kidney lesions of toxemia of pregnancy. These observations and results brought about the establishment of a system by which each patient would be thoroughly investigated and placed into one of three groups: (1) chronic nephritis complicating pregnancy; (2) recurrent toxemia of pregnancy; and

(3) acute toxemia of pregnancy. With this idea in view a definite scheme for the study of toxemia patients was established in the form of a postnatal clinic and with an adequate follow-up system. In the course of the investigation, liver function tests, blood chemistry and phthalein tests are done and the eye grounds are examined. These tests are repeated postpartum to establish the diagnosis. The cases are then grouped in a toxemic index for future reference.

This is a great step in advance and will ultimately place the diagnosis and treatment of the late toxemias of pregnancies on a satisfactory basis, providing for a more intelligent and favorable prognosis. Similar procedures have been inaugurated in the Stanford Women's Clinic, and it is hoped that in time valuable information will be obtained. Of our 3338 confinements there were 135, or about 4 per cent of patients, whose symptoms, blood pressure determinations and laboratory findings were such as to class them in the group of toxemia of pregnancy. Owing to the fact that these records extend over a period of several years, that the observations were made by various attending physicians, many only temporarily connected with the obstetrical department, and that, although a large amount of social service work has been carried on for years, no systematic follow-up of the toxemic patients has been attempted until recently, the data concerning these patients are far from complete.

Our follow-up records show that twenty-seven toxic patients have had subsequent pregnancies, of whom thirteen had one or more normal pregnancies following the toxic one. The fourteen patients who showed recurrent toxemia had sixty-one pregnancies, of which thirty-eight pregnancies were complicated by toxemia. Twenty-five patients of 135 had convulsions. Twenty-one of these were primiparas and four were multiparas; two had spontaneous abortions following their eclamptic pregnancy; one had eclampsia followed by two normal pregnancies; while three had one or more toxic pregnancies following the one complicated by eclampsia. However, no patients in this series had recurrent eclampsia. In the eclampsia patients the maternal mortality was 16 per cent. The fetal mortality was 20 per cent, 12 per cent occurring in patients with recurrent toxemia.

The group of fourteen patients having recurrent toxemia was studied with respect to the character, onset and duration of symptoms in each pregnancy, antepartum and postpartum findings on urinalysis, antepartum and postpartum blood pressure readings, and to the results of certain kidney function tests. The special tests used in the diagnosis were the phenolsulphonphthalein test, blood urea, and the determination of the percentage of normal kidney function as figured from a method developed by Addis. This method is based on the observation that under certain special conditions the function of the kidney is limited by, and becomes a measure of, the quantity of effective tissue it contains. Under these conditions experiments have proved that the ratio urea in one hour's urine

—equals the amount of effective renal tissue. The average ratio in normal adult males was found to be 50.4, which is the accepted standard to represent 100 per cent normal renal



function. Spalding, Shevsky, and Addis applied this test to a series of pregnancy patients both toxic and nontoxic, and figured the renal capacity of each patient with respect to the per cent of normal average ratio. The normal pregnancy patients showed an average of 106 per cent of normal ratio, while the toxic patients showed in general variable percentages below 100 per cent. These observers supplemented the test by a careful study of the urinary sediment, which indicates whether the kidney lesion is in the main inflammatory, degenerative or atrophic. They concluded that the danger lies not in the extent of the renal lesion during the acute toxemia, but in the fact that it may fail to heal and may become a continuing and self-perpetuating disease which either alone or with the help of a complicating arterial disease may ultimately lead to the death of the patient in uremia. Our toxic follow-up work now includes for each patient several complete kidney function tests as above mentioned and, although the results are not yet completed, this promises to be of great prognostic value in recurrent toxemia.

Applying the above methods of diagnosis to fourteen patients who had toxic recurrences, it was found that four patients, or about 28 per cent, either had or developed in the course of their pregnancies chronic nephritis, while ten patients with recurrent toxemia had no demonstrable kidney lesions. The four patients with chronic nephritis had interesting obstetrical findings. The first had four toxic pregnancies, death following hysterotomy at nineteen weeks because of chronic nephritis. The second had three toxic pregnancies and showed a deficient kidney function before the last delivery. On examination two years later she showed a heavy cloud of albumin and a blood pressure of 230 systolic and 150 diastolic. In each pregnancy the symptoms were progressively more severe and appeared earlier. The third patient had four toxic pregnancies and showed deficient kidney function both before and after the delivery of her third baby at term. Her fourth toxic pregnancy was terminated by Caesarean section, and sterilization was done to protect her kidneys. The fourth patient was delivered by Porro Caesarean section in the eighth month of her second toxic pregnancy. Her blood pressure was 270 systolic and 150 diastolic, and the urine showed a heavy cloud of albumin, hyalin, and granular casts. Four years later the blood pressure was 236 systolic and 136 diastolic. These four patients bring out the following points: that in chronic nephritis complicating pregnancy there is a relatively early onset of symptoms, earlier with each succeeding pregnancy; persistence of pathologic changes in the urinary organs over a period of months following delivery and often never completely clearing up; a hypertension of marked degree, persisting and increasing in spite of extensive prenatal care; and a deficient kidney function.

We meet another difficult problem when considering the group of recurrent toxemia patients without evident permanent kidney damage, because the prognosis is doubtful. Ten patients were placed in this group for the following reasons: (1) relatively late onset of symptoms, with a variable but usually earlier onset in subsequent pregnancies; (2) relatively late and sudden onset of pathological distur-

ances of the urinary organs; (3) rapid clearing up of the urine postpartum; (4) late development of hypertension with a rapid return to normal level; and (5) a normal or somewhat impaired renal function showing improvement after delivery.

Seven of these patients, with the aid of watchful prenatal care, were carried through their last toxic pregnancies and labors satisfactorily. Two patients were delivered at term, one spontaneously and one by version and breech extraction. In five patients pregnancy was terminated in the ninth month because of the severity of their symptoms. Three had labor induced and were delivered by version and breech extraction, and two were delivered by Caesarean section and were sterilized.

The other three patients had a less fortunate outcome. The first patient had her first baby prematurely by Caesarean section for eclampsia. Three years later she was delivered prematurely of a macerated fetus, low forceps being used in the second stage. The following year a Porro Caesarean section was done for placenta ablatio, and the fetus was stillborn. However, kidney function tests showed no impairment of renal function, and her symptoms cleared up rapidly between pregnancies. The second patient had one therapeutic abortion for hyperemesis. Her second pregnancy was terminated by Porro Caesarean section at six months because of severe toxemia, which began soon after conception and became progressively worse. She and the baby died within one day after the operation. Autopsy showed extensive necrosis of the liver and kidneys. The third patient was delivered by Caesarean section for severe toxemia accompanied by coma. After the operation she became delirious, but her symptoms finally cleared up and within two weeks the urine was negative and the blood pressure normal. Two years later she developed eclampsia in the seventh month and died a few hours after a Caesarean section. The baby lived one month. These last records show that with the ordinary clinical means it is difficult and often impossible to determine which patients in this group can be carried through their pregnancies without endangering their lives.

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#### DISCUSSION

FRANK C. AINLEY, M.D. (1136 West Sixth Street, Los Angeles)—Those patients in whom nephritic toxemia exists during successive pregnancies, and those in whom an eclamptic toxemia appears with the first pregnancy and nephritic toxemia appears during subsequent pregnancies, offer little difficulty, but whether or not it will be found that there is such a thing as "recurrent toxemia of preg-

nancy" as an entity will depend upon a more extensive knowledge of the biochemistry of the pregnant woman than exists at the present time.

A recent patient under my care is of particular interest. She was observed during three pregnancies and deliveries. In all of the pregnancies she showed evidence of toxemia, with no evidence of kidney insufficiency after the first or second. Late in the third pregnancy she developed convulsions and died shortly after delivery. At autopsy the kidneys were found to be quite normal, but the liver showed the hemorrhagic lesions characteristic of eclampsia. The findings suggest the possibility that an eclamptic toxemia might have been present in three successive pregnancies without producing chronic kidney change, or there still remains the possibility that the first and second pregnancies were associated with some other form or forms of toxemia neither eclamptic nor nephritic, but of some type which will only be understood when our knowledge of the chemical processes in the body of the pregnant woman are more thoroughly understood.

The infinite number of biochemical variations possible during pregnancy which might result in an intoxication of the patient would seem to make it probable that there may be a number of different toxemias, of which eclampsia, with its specific pathological lesions in the liver, is only one example, and it is conceivable that a patient might experience a different toxemia with each of successive pregnancies, none of which necessarily showing marked or permanent kidney symptoms.

ALFRED B. SPALDING, M. D. (Stanford Hospital, San Francisco)—Doctor von Geldern is to be congratulated for presenting so clearly a survey of the American literature in regard to clinical observations so far made in a few clinics on recurrent toxemia of pregnancy. I would like to emphasize the difficulties that are met with in successfully conducting a follow-up clinic for pregnancy patients. Because of the expense associated with such work, only a few clinics can even partially carry on this work. I think here is where some good work can be done by public health nurses to help private doctors to educate their patients to the needs of study after a toxic pregnancy. While we know very little about toxemia of pregnancy, it seems justifiable to agree with Von Geldern that a considerable number of pregnancy toxemias recur in subsequent pregnancies and that many of these are complicated by chronic nephritis. I would like to emphasize the prognostic value of quantitative renal function tests such as have been conducted at Stanford University School of Medicine for a number of years by Thomas Addis. With a kidney function test normal a year after delivery, it is justifiable to advise such a patient to again attempt pregnancy, provided she can have careful prenatal care. Where the late kidney function test shows persistence of kidney damage, the prognosis of future pregnancies is very grave.

Many doctors think that they lose patrons by adopting business methods in the collection of bills for professional services rendered. As a matter of fact the contrary is the case. Prompt payment makes friends, and slow payment often makes enemies. Seldom, if ever, does a reputable doctor fail to extend appropriate leniency to the deserving poor, but there are very few people who cannot afford to pay something, be the amount ever so small. It would be far better for those in moderate circumstances, if their self-respect is to be preserved, if given an opportunity to pay within their means.—J. Indiana M. A.

Educators are quite generally agreed these days that health should be given most importance in the school curriculum. At the same time some of them point out that health is something we cannot define. In a way health cannot be defined, but neither can we define life, and we are constantly revising our notions about such fundamental phenomena as matter and energy. Even when we work out our definition of health it does not apply specifically as does a definition of electricity or of ether, for the health of one person is by no means the health of another.—M. J. and Record.

## ANTI-SCIENTIFIC PROPAGANDA

By PETER FRANDSEN \*

THIS country seems to be especially favored in the development of all sorts of pseudo-scientific cults and anti societies. The anti-vivisectionists have been with us for a long time, but lately their strength, or at least their noise, has been increasing. The anti-vaccinationists seem to be getting more noisy, and they have succeeded in overturning legislation designed to control the spread of smallpox in several states. In Minnesota, since 1903, they have prevented the enactment of contagious disease control legislation. It is not surprising then that that state should have a record of 9000 cases of smallpox in 1921. Massachusetts, with a compulsory vaccination law, has not had more than forty cases annually since 1917. California repealed its compulsory vaccination law, and had over 5000 cases that year. Connecticut, Montana and other states have weakened their state laws because of the influence of the anti-vaccinationists. Is it any wonder that smallpox is one thousand times more prevalent in Montana than in Massachusetts in proportion to population, and that the rate in California is fourteen times as great as it is in Japan?

Pseudo and unscientific cults are springing up and finding it easy to get a hold on the popular mind, and are making some headway in establishing themselves on an equally recognized basis with scientific medicine. The legislature of West Virginia in 1925 passed an act recognizing naturopathy and chiropractry as accredited forms of healing. In most states, religious healers, neuropaths, psychopaths, herbalists, food fad healers, as well as osteopaths and chiropractors, find little difficulty in practicing on patients for all sorts of human ailments. While all these antis differ in their origin and propaganda, they are alike in that they are an attack upon the scientific methods not alone in medicine but in all fields of knowledge. The anti-evolutionists have at least made a fair start, and what they may yet accomplish in legislation affecting the teaching of theories based upon scientifically observed facts remains to be seen. This movement may easily extend itself to other matters than the question of man's origin.

What are the reasons for all this anti propaganda and its success? How may its capacities for harm be counteracted? are questions that call for an answer from those trained in scientific methods. Some of the propagandists are fanatics whom we will always have with us, but a substantial percentage of their followers are intelligent men and women. Some have an exaggerated notion of what they call personal liberty and the right to their own beliefs; others are sentimentalists in their attitude toward animal life as compared with human life. The new schools of healing find a listening ear in their appeals to prejudice and ignorance, the human love

\* Peter Frandsen (University of Nevada, Reno, Nevada). A. B. A. M. Harvard University; L.L.D. University of Nevada. Appointments: Professor of Biology, University of Nevada; Advisor to Pre-Medical Students. Publications: Topical Outlines of General and Personal Hygiene; Laboratory Guides for General Zoology and Physiology, published by University of Nevada. Several papers in scientific literature, including Reactions of Limax Maximus.



of the mysterious, their deliberate misrepresentation of the facts and their clever advertising methods. When forced to defend their positions they point to medical and scientific mistakes of the past. Bleeding was once a universal medical practice, malaria was thought to be caused by bad air. The germ theory of disease is just another guess; vaccination and serums are only a present-day fad. Such is the gist of their argument. I suppose a majority of our scientifically trained physicians of today will agree with Hippocrates in his estimate that seven out of every ten patients who recover would recover without any special treatment. Therefore, the most that any form of treatment can claim is 30 per cent of the cures effected. The other 70 per cent can be accredited to whatever cults are smart enough to catch the patient's fancy. Since many recoveries are slow, and humanity impatient, some of the 30 per cent may give the credit to one of the quacks they may consult after the educated doctor appears to have failed.

No scientist believes that the knowledge he possesses is complete. He knows that present-day theories and practices may have to be changed in the light of new truths discovered tomorrow. What he does have lasting faith in is the scientific method which bases its practice on the most painstaking observation re-enforced by carefully controlled and rigidly analyzed experiment. The pseudo-scientific guesser creates a plausible theory out of gossamer stuff undisturbed by any facts, and relies for his arguments on superficial analogies or some mystical belief. Until recently the scientific worker has not troubled himself much about this popular propaganda. He has assumed that the facts would eventually speak for themselves. But sometimes good causes may fail or be seriously crippled for lack of aggressive championship, and it was the realization of this fact that led to the organization of the American Association for Medical Progress.

In November, 1921, the New England Anti-Vivisection Society held a convention in Boston. There was a large attendance of interested people. Many of them were startled when they were told that research institutions like the Rockefeller Foundation were only worthless establishments for practicing cruelties on helpless animals; that men known to and respected by the audience were monsters of cruelty; that modern methods of curing and preventing disease were only means to fill the pocketbooks of an organized medical trust. Speakers told them that vaccination was the pouring of diseased pus from a sick cow into the child's blood. So vicious was the propaganda, that a group of the attending laymen were aroused to organize for the purpose of combating the promulgation of these and other untruths. It was first called the Society of Friends of Medical Progress, became active in 1923, and in 1924 changed its name to The American Association for Medical Progress.

The purpose of the organization is to inform the public of the truth regarding the value of scientific methods of research to human and animal welfare; to combat legislation dangerous to health; to aid in securing desirable legislation; to see to it that high

standards for the practice of the healing art are adopted and enforced in order to protect the ignorant and helpless from the predatory quack and impostor. In the two years of its existence this association has published many well-written pamphlets, and has had representatives at conventions and public gatherings in many states. Why should a lay organization take the promotion of medical progress upon its shoulders? Why should not the medical profession be organized for this purpose? If it did so the anti-propagandists would foster the public suspicion that it was inspired by selfish motives and was seeking to make its own stronghold impregnable. Such a charge cannot be as effectively brought against a lay organization. Moreover the informed layman has the chief responsibility in the matter because it is he and his family that will have to suffer if medical progress is impeded, and it is the public that will have to pay the bills.

Needless to say, the society asks and needs the co-operation of practicing physicians and other scientists in arresting these destructive anti-forces. Much can be done in the schools to educate the younger generation, but there will always be a large section of the public, reachable only through the public press, public gatherings, and the individual contacts between physician and patient. To what extent can the medical profession aid in safeguarding the scientific method?

One of the reasons the antis are so successful is that they talk in a language the man on the street can easily understand. The charlatan has a simple, plausible explanation for things that are not so easily explained in a scientifically accurate way. Most of the common people look upon the doctor with awe mingled with fear. He is a man of mysterious knowledge and possesses a power beyond their comprehension. Unfortunately there is a temptation to foster this attitude on the part of some by employing highly technical terms in dealing with patients and relatives. The Latin prescription helps to mystify still more. Is it any wonder that the puzzled patient becomes interested in the simpler explanation of the pseudo-scientist or that he can be made to believe that technical descriptions and Latin prescriptions are a device to conceal ignorance, as they sometimes may be?

The average person, in things medical, is like a little child in his first questions about the world in which he lives. He asks his elders puzzling questions. The shortest way out is to tell him that he is too little and too ignorant to understand. The second way is to invent some simple fairy tale explanation, such as the stork bringing the baby down from heaven. This satisfies for a time, but the deception may destroy confidence later on. If we try to tell the child the whole truth we bewilder him and he will not ask again. The hardest but best plan is to answer him truthfully, without concealment, in the simplest terms, and to go no deeper into the subject than will satisfy his immediate needs. The relations between doctor and patient would certainly be strengthened if the former would make himself a good teacher. By taking pains to explain the principal facts, by helping the patient

to follow his own reasoning, by pointing out the possibilities for harm, especially in imperfectly developed new lines of treatment, he may save the patient from the clutches of the modern quack who advertises serums and gland preparations as cure-alls.

In times of epidemics, well-written accounts of the situation, with suggestions and advice to the public such as the Nevada Hygienic Laboratory has been putting out during the past year, will do much in answering questions and creating confidence. Health meetings, with addresses in nontechnical terms by competent speakers, also are of recognized value in educating the public. Would it not be a good plan for the local and state medical societies to regularly have some one of their meetings especially arranged for the public? At such a meeting the progress of medicine could be presented in such a way as to make many new friends to the cause of medical progress. In short, the more scientific men can take the public into their confidence, and the less they shroud their activities in a veil of technicality or aristocratic seclusion, the better it will be for the safety of scientific methods and the welfare of the race.

To the steadily increasing number of pharmacists who are handling biologics, and who realize the rapid growth of the tendency of the medical profession to employ these therapeutic agents in their practice, the announcement that the United States Public Health Service has issued to E. R. Squibb & Sons the first license ever granted for the manufacture and sale of Erysipelas Antitoxin is of the utmost importance. The fact that approximately 3000 deaths are caused annually by erysipelas and that thousands of other cases are under treatment emphasizes the vital importance of Erysipelas Antitoxin (Squibb) as a scientific attainment and as an ally in offsetting the ravages of this dread disease. From a commercial viewpoint the offering of this new antitoxin affords the pharmacist additional opportunity to co-operate with his physicians and to develop his business along strictly professional lines and in a highly profitable manner. Erysipelas Antitoxin (Squibb) is marketed under an exclusive license from the School of Medicine and Dentistry of the University of Rochester, Rochester, New York, and is prepared according to the principles developed by Dr. Konrad E. Birkhaug of that institution. The license provides, among other things, that samples of each lot of Erysipelas Antitoxin (Squibb) must be submitted to the University of Rochester for test and approval before distribution. This control is in addition to that made in the Squibb Biological Laboratories and constitutes an added guarantee of the potency of the antitoxin. The control by a laboratory outside of the Squibb organization is of particular importance in the case of Erysipelas Antitoxin because the Hygienic Laboratory of the United States Public Health Service has not established any standard of potency and does not recognize "units" of potency. Erysipelas Antitoxin (Squibb) is supplied in concentrated form only, and will be distributed only in syringe packages, containing one average "Therapeutic Dose."

Is it not stimulating to us who are interested in hospitals as instruments for the furtherance of human welfare that these institutions are now permitted to share in the great advances that are being made and that are likely to be made in the future? Until recent years, while the hospitals were appreciative of the contributions which their physicians made to medical progress, yet, as organized institutions, the hospitals themselves played little part in these advances; but now they stand beside the universities and the scientific institutes in educating physicians and in advancing medical science.—Rufus Cole, Science, August 6, 1926.

## RECENT STUDIES IN SCARLET FEVER

By EMIL BOGEN \*

(From the Contagious Division Service, Los Angeles General Hospital)

The modern conception of scarlet fever is that it is an acute infectious disease caused by certain strains of the streptococcus hemolyticus. The usual site of the infection is in the nasopharynx, but it may find entry also through wounds or other portals, and may become secondarily localized in the glands, ears, kidneys, or other organs. It is characterized partly by the symptoms produced by the local infection, but especially by the general systemic effects produced by the circulating soluble toxin, which is generated by the organisms at the local site of infection and disseminated through the blood stream to all parts of the body. It is the toxin that gives rise to the exanthem, the fever, the toxemia, and the other general symptoms of scarlet fever. Antitoxins are produced in the body of the patient, which can entirely neutralize the effect of the toxin and thus produce a permanent immunity to reinfection with scarlet fever. About two-thirds of the population not previously attacked by scarlet fever contain such antitoxin in their tissues. Its presence or absence can be detected by means of the Dick test. The toxin can be neutralized locally, as in the Schultz-Charlton test, or systemically, as in the serum therapy of scarlet fever, by the injection of antitoxin secured from convalescent patients or from horses immunized according to the methods of Moser, Dochez or Dick, but we are unable as yet to prevent the development of complications. Active immunization by means of vaccines and toxins is being attempted, but so far has not been an unqualified success. Our experiences at the Los Angeles General Hospital have been in complete accord with this conception, and lead us to expect that it will not be long before scarlet fever may be completely brought under control.

DISCUSSION by J. E. McKillop, Oscar Reiss, J. D. Dunshie, Rogers F. Wakefield, Los Angeles.

SINCE 1885, when Klein described the streptococcus scarlatinae as the cause of scarlet fever, hemolytic streptococci have been frequently found in the nasopharynx; in the blood and urine and in the discharge from the ears of patients suffering from scarlet fever. These bacteria have also been found in local wounds in wound scarlet; in infected burns in burn scarlet; in the lochial discharge in puerperal scarlet; in the milk in a milk-borne epidemic, and in every possible relationship to this disease. Yet only three years ago Hektoen showed in an exhaustive historical survey that Koch's third postulate had not yet been met by the experimental production of scarlet fever in man or in animals by the inoculation with a pure culture of streptococci. Moreover, the work of the Italian investigators, Caronia, Di Christina, Sindoni, Vitelli, Ritossa, and others during the past few years pointed almost as clearly to an anaerobic diplococcus as the cause of this disease.

At last, after a series of brilliantly persistent studies extending in unbroken line for over a decade, George F. and Gladys H. Dick of Chicago in 1923 succeeded in producing typical scarlet fever in a number of human subjects by inoculations with cultures of a specific strain of hemolytic streptococci isolated from a scarlet fever patient. They then developed a method for testing the susceptibility of an individual to scarlet fever, thus furnishing an explanation to the failures of so many previous at-

\* Emil Bogen (1100 Mission Road, Los Angeles). M. D. University of Cincinnati. Hospital Connections: Los Angeles General Hospital. Publications: "Clinical Test for Liver Function," (Journal of Laboratory and Clinical Medicine, 1923); "Pneumonic Plague in Los Angeles" (California and Western Medicine, 1925).



tempts to produce the disease experimentally. Later they prepared an antitoxic serum that can neutralize the scarlet fever toxin and cause a disappearance of the rash, and finally a preventive toxin mixture that may produce immunity from the disease in individuals previously susceptible to it.

Nor have the reports of the Dicks been without confirmation and corroboration. Careful to a fault, and slow to publish any of their work until it had been well established at every step, their published results were met by those of Dochez, Blake, Zingher, and many other writers, who, working independently, with the aid of the discoveries previously published, were arriving at the same wonderful results. And so used is the public to the idea of a great discovery in modern medicine that the first articles were hardly off the press than commercial houses were avidly striving to produce the desired sera, toxins and vaccines. Naturally, in the face of such wonderful discoveries, hopes ran high, and imagination was difficult to restrain, and so many workers have felt some disappointment as the earlier expectations were curtailed in the face of the facts as actually developed. There has been such a striking unanimity of reports from so many different workers, working on such a large scale, however, that it is already possible, less than three years since the revelations of their first successful human experiments by the Dicks, to gather a fairly well-supported idea of the nature, cause, and immunogenic factors in scarlet fever, and to place considerable reliance upon the methods and materials recommended for dealing with this disease.

The Dick test, which forms the basis upon which our entire conception of scarlet fever has been reconstructed, is a method for the determination of the susceptibility of an individual to this disease similar to the well-known Schick test in diphtheria. To perform the Dick test one-tenth of a cubic centimeter of a known standardized solution of toxin, obtained from the condensation water of a culture of the hemolytic streptococcus derived from a case of scarlet fever, is injected intracutaneously, with a known inert control to rule out simple skin hypersensitization reactions. A positive test, representing susceptibility to scarlet fever, manifests itself in the absence of sufficient antibodies to neutralize this toxin by the formation of an erythematous reaction, producing a reddened area around the point of injection. It develops in the course of about twelve hours and persists for a day or two. The appearance of a reddened area at the point where the toxin was injected, with the absence of any reaction to the control, is conclusive evidence of the susceptibility of the individual to scarlet fever, while the absence of such a reaction evidences immunity to the disease. The considerable data which has been accumulated indicates that about 40 per cent of the general population who have never had scarlet fever are susceptible to it; that almost every scarlet fever patient has a positive Dick test at the onset which disappears and is replaced by a negative Dick test during the course of the disease; that almost all persons who have ever had scarlet fever manifest immunity by negative Dick tests.

During the past year over 300 Dick tests were performed at the Los Angeles General Hospital

with the aid of Doctor Dunshee of the City Health Department.

Of the 300 tests 78 were positive and 222 were negative. Of 153 of these patients who had never had scarlet fever 47 showed a positive test, or 30 per cent. Of 115 who were in the hospital for scarlet fever, 29 gave a positive test, or 25 per cent; while of 32 who stated that they had previously had scarlet fever, only two, or 6 per cent (both nurses), gave a positive reaction. It is worthy of note that all of the cases of erysipelas tested, eleven in number, gave a negative reaction. This is a very small group, but is suggestive of the possibility that infection with other strains of hemolytic streptococci may aid in the production of some degree of nonspecific immunity to scarlet fever. These figures tally fairly closely with those published from other sources, and give a fair picture of the relative immunity in the various groups. As Zingher has shown, the proportion of positive tests diminishes with advancing age, and in general keeps a fairly constant relationship to the number of positive Schick tests in the same group.

TABLE ONE

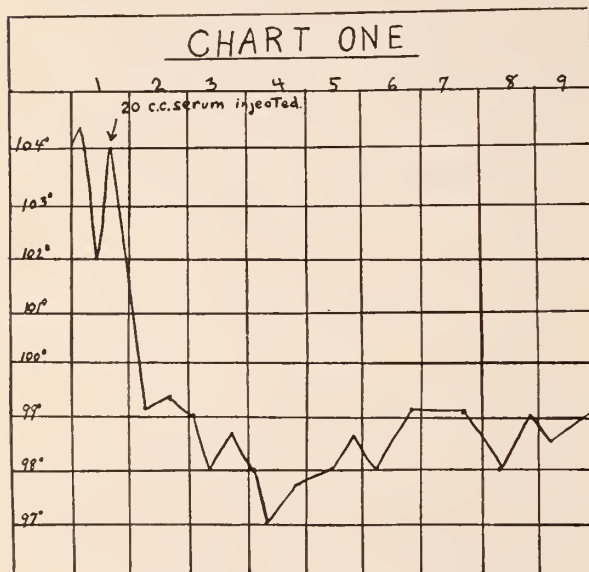
	Dick Positive	Dick Negative	Total
Patients with scarlet fever.....	29	86	115
Patients who have had scarlet fever .....	2	30	32
Patients who have not had scar- let fever .....	47	106	153
Total .....	78	222	300

The blanching test of Schultz and Charlton, introduced only a half-dozen years ago, is based upon the observation that if a small amount of serum from a convalescent patient, or in fact any serum containing antibodies against the scarlet fever toxin, is introduced into the midst of an area of scarlet fever erythema, it will, by neutralizing the toxin present, cause a disappearance of the erythema at that spot, giving a sharply defined characteristic blanching of the rash. If, however, the erythema is due to any other cause than the specific toxin of the scarlet fever streptococcus this blanching will not occur. This is a very valuable method for the differentiation of scarlet fever from rashes of other origin which might be confused with it. About thirty such tests were performed at the General Hospital during the past year, and in certain cases the reactions were of real aid in arriving at the diagnosis. Serum from convalescent scarlet fever patients, or more conveniently horse sera prepared after the methods of Dick or Dochez, may be used. This test can only be applied during the height of the rash, and cannot be read if the rash has disappeared, but the definiteness and prominence of the blanching is of great value and conviction when it is noted, lasting sometimes for days, until the rash has disappeared.

Convalescent serum from scarlet fever patients has been used to prevent and especially to treat this disease for many years, but the difficulty in procuring the serum and the uncertainty as to its strength has militated against its more widespread use. The sera prepared by Moser in 1902 and the antistreptococcic sera of Marmorek have still some

adherents in this country, but it is only since the introduction of the methods of Dochez and Dick that immune horse serum against scarlet fever has been produced on a large scale. It must be recognized that so far these sera appear to be mainly antitoxic, capable of neutralizing the toxin in the blood and tissues of the patient, but possessing little or no effect upon the organisms producing that toxin. It has been quite generally found that the intramuscular injection of these sera results in a marked and almost immediate drop in the fever, accompanied by disappearance of the rash and other signs of the general toxemia of scarlet fever, but there is still conflicting evidence as to its value in reducing the incidence of the much-dreaded complications and sequelae of this disease. The high incidence of serum reactions from the crude preparations so far available also militates against its wider use, as well as the comparative costliness of the sera.

Of twenty-five patients who received injections of antitoxic horse serum at the Los Angeles General Hospital, representing only the more seriously ill among our scarlet fever patients, fifteen showed an immediate and marked drop in the fever and other toxic symptoms. Most of the other ten showed signs of already developing complications, which seemed to be unaffected by the serum treatment. These included purulent otitis media in five patients and suppurative adenitis in three others. Eight of the twenty-five patients developed marked serum sickness, which was remarkable in that it came on within a day or two after the administration of the serum instead of the customary eight to twelve days later.



The prevention of scarlet fever by the active immunization of susceptible individuals, so ably initiated twenty years ago by Gabritchewsky, is one of the most important but also the most difficult phases of the entire subject. It has been found that simply mimicking the splendid method used against

diphtheria is ineffective in scarlet fever. The immunity thus conferred is shortlived and unreliable. Attempts to increase the efficacy of vaccines by the addition of the dead streptococci are being continued, but so far have not been an unqualified success. We used the method of injecting large doses of toxin on twelve employees at the hospital, but abandoned it after one of them, who had previously had a strongly positive Dick test, contracted a mild case of scarlet fever six weeks after a series of injections with the supposedly immunizing doses of toxin. Attempts with the newer and more potent vaccines are still in progress.

#### DISCUSSION

J. E. McKILLOP, M.D. (Garland Building, 740 South Broadway, Los Angeles)—Studies in scarlet fever are particularly timely at this time, as our interest has been reawakened by the skin tests and studies in the etiology of this condition. Doctor Bogen has shown the inquisitive spirit in his work upon the diagnosis and therapeutics of disease which leads to advance.

Personally we have been greatly aided in our diagnosis of atypical scarlet fever cases by the hyperleukocytosis with continued high eosinophilia the Rumpell-Leede phenomenon, this and the various discutient tests. In using the discutient tests of Schultz and Charlton it may be necessary to use serum upon the suspected case, and also use his serum upon a known case of scarlet fever, and when these various tests have been applied to a suspected case I see no reason to doubt the correctness of the diagnosis made. Bogen's results are in conformity with those published by others. However, until a more accurate determination of the exact amount of toxin required for immunization and an agreement of the best method to be followed in its preparation has been made, it seems best to counsel a use of the therapeutic serum only in hospitals and carefully controlled homes.

OSCAR REISS, M.D. (2007 Wilshire Boulevard, Los Angeles)—Doctor Bogen's paper represents an excellent review of the recent advances in scarlet fever, with a clear statement of the generally accepted conclusions, and the results are practically in accord with similar experiments in various parts of the country. In addition to observing the work of Bogen, I have Dick-tested a large group of children, and have used the Schultz-Charlton blanching test as an aid to differential diagnosis in scarlet fever, and am routinely using scarlet fever antitoxin in the treatment of the severe cases. However, I am not yet ready to use or advise the general use of scarlet fever toxin for the active immunization of nonimmune children. I believe there is a necessity for a more accurate determination of the exact amount of toxin that it requires to actively immunize an individual against scarlet fever, and for more definite proof that considerable harm is not done to a certain number of individuals to whom the toxin is given in an attempt at immunization. Particularly here in California where so many antimicrobial cults exist, it might do almost irreparable damage and make it extremely difficult at a later time to do general immunization if it be attempted at this time when our material is not sufficiently standardized and our knowledge not sufficiently accurate to secure nearly 100 per cent results.

I believe that the work of the Dicks, Dochez, and others, stands out as one of the crowning pieces of work in preventive medicine, and I have great hopes that in the near future immunization and antitoxic treatment of scarlet fever will reach the same assured place that has been reached in the immunization of diphtheria.

J. D. DUNSHEE, M.D. (156 North Spring Street, Los Angeles)—Doctor Bogen's paper is a clear and concise statement of a painstaking and thorough piece of work. He has gone carefully over the literature of scarlet fever, and his whole paper has demonstrated his ability in this line of research.

His work on erysipelas, though in a small series, cover-



ing all the available material, exemplifies this and is very interesting.

During the time we were doing this, scarlet fever was reported in a boarding school for girls in Los Angeles, which gave an excellent opportunity for additional study. The pupils in this school are all Mexican, and 129 in number. Coincident with the appearance of scarlet, there were a large number of cases in the school, and the city as a whole, of some condition which may have been scarlet border-line cases not possible to diagnose positively as scarlet or influenza.

In addition to the one reported scarlet, there were six with rash which would clinically justify one in pronouncing scarlet. I did the Schultz-Charlton test on all cases with rash, getting a positive test with the one scarlet and a sister of hers. These were immediately transferred to the contagious service of the General Hospital.

The remaining ones with rash gave a negative reaction to the Schultz-Charlton, and a positive Dick test.

I Dick-tested all of the inmates of the institution; 26 per cent gave a positive reaction to this test. All were kept under close observation, particularly those giving a negative test. No new cases developed in this institution.

This was all done within twenty-four hours of the appearance of the first case, and consequently before sufficient time had elapsed to have given a negative Dick test after the onset of scarlet.

I am convinced of the usefulness of scarlet fever antitoxin in the treatment, and of these various tests as an aid to diagnosis, but do not feel that we are ready to use any preparation of toxin-antitoxin as a means of securing immunity.

I wish to acknowledge my appreciation to Eli Lilly & Company and H. K. Mulford for furnishing without charge both the antitoxin and the Dick test and control used in my work.

ROGERS F. WAKEFIELD, M. D. (Los Angeles General Hospital, Los Angeles)—One of the really valuable applications of the newer knowledge of scarlet fever may be found in the passive immunization of persons who have been exposed to the disease. A prophylactic injection of a small dose of the Dochez serum was given to a number of persons who were known to have been in contact with a scarlet fever patient, and no one of them developed the disease.

**Magnesium Sulphate Intravenously**—Lyle G. McNeile and John Vruwink, Los Angeles (Jour. A. M. A.), assert that the intravenous injection of a 10 per cent solution of magnesium sulphate is a valuable adjunct in the treatment of toxemia of pregnancy. It will cause some reduction of blood pressure, reduce edema, increase urinary output, and reduce or control other symptoms. It will control the convulsions of eclampsia in nearly every case, and exercises a favorable influence on the other symptoms of eclampsia. It is a safe procedure. As a prophylactic agent it will give definite results, the toxic symptoms will frequently disappear entirely, or the condition will be arrested and the patient go on to normal labor. If, on repeated injections, the toxic symptoms recur, pregnancy should be terminated. Regardless of the eventual course of the toxic state, intravenous medication places the patient in a condition with increased resistance and eliminates the dangers subsequent to convulsions both for the mother and for the baby.

When we find that the county medical society wields but little influence in the county we soon discover the secret if we seek for it. There is too much ill feeling. The doctors are not free enough in their everyday association, and the feeling is often so great that one man to gain an advantage over another may be willing to let the whole organization go to ruin. If our physicians do not discover means of taking care of themselves by union and organization, the public will in no distant day feel the wisdom of state direction of the practice of medicine, state medicine. The public see the necessity of physicians, but may they not see, to them, a better plan to secure such service, doing away with the individual private physicians?—J. Iowa M. Soc.

## RESECTION OF THE KIDNEY FOR STONE

By A. J. SCHOLL \*

DISCUSSION by Miley B. Wesson, San Francisco; H. M. Richter, Chicago; E. S. Judd, Rochester, Minnesota.

THE following report is based on a case of bilateral nephrolithiasis; one kidney was removed and the stone-bearing area of the other kidney resected. Czerny reported the first case of resection of the kidney in 1886; a portion of the kidney was removed following trauma. Kummell several years later resected a segment of a kidney for stone and abscess. Young resected the upper third of a kidney for localized pyonephrosis and stone. A clamp was placed on the renal pedicle during the resection. Young cites a patient operated on by König in which the upper atrophic portion of the kidney was resected and a stone removed. Richter reported a case in which the lower third of a kidney was replaced by a thin-walled sac containing turbid urine and several calculi. The upper segment of the kidney was firm and grossly normal in appearance. A wedge-shaped section including the entire sacculated lower third, extending down to the pelvis and going well back into firm normal tissue, was excised. Three months later the patient was perfectly well.

Cases in which resection was performed on a single remaining kidney are rare. Intervention in such circumstances is usually an operation of emergency and must necessarily be as conservative as possible. Papin reported a case of bilateral tuberculosis in which a partial resection was carried out on the left kidney; later a right nephrectomy was performed. The resected kidney had a duplicated pelvis.

Hinman has shown that in partially destroyed kidneys the return of function in the remaining kidney is at times prompt if the opposite kidney has been removed. Where there is bilateral disease with complete destruction of one kidney the better organ has gradually assumed most of the function. Removal of the dead kidney with repair of the other offers the patient the best opportunity for complete recovery. The work of Tuffier thirty years ago, and later Bobroff, demonstrated that life could be supported on a very small portion of a normal kidney. Tuffier did a total unilateral nephrectomy plus more or less extensive resections of the other kidney in an endeavor to find exactly the quantity of kidney tissue necessary for the maintenance of life. He found that there was a definite regeneration of tissues in the remaining segment if the portion allowed to remain was sound, otherwise not. Tuffier's work formed the basis of his later "morcellement" nephrectomy. Stoerk described two methods of new formation of renal parenchyma, one by the elongation and winding around of normally present tubules, the other by ramifications due to new budding. Simpson demonstrated that the epithelium of the tubule is capa-

\* A. J. Scholl (721 Pacific Mutual Building, Los Angeles). M. D. Harvard University. Graduate study: Five years at the Mayo Clinic. Practice limited to Urology. Hospital connections: St. Vincent's Hospital, Los Angeles. Publications: "Papillary Tumors of the Renal Pelvis" (Surgery, Gynecology and Obstetrics, February, 1924, 186-99); "Tumors Involving the Dome of the Bladder" (A. M. A., 1924, Vol. 83, 1147-52); "Review of Urologic Surgery" (with E. S. Judd and foreign contributors) appearing regularly in Archives of Surgery; "Hydronephrosis and Pyonephrosis, A Review of 1177 Cases" (with E. S. Judd), Surgical Clinics of North America, Vol. 4, 1924, pp. 425-44.

ble of proliferation and small losses in the tubular epithelium are quickly replaced. When there is a demand for compensatory hypertrophy in the remaining renal tissue its beginning is indicated as early as the third day.

Bilateral nephrolithiasis is always a serious condition; this is especially so when one kidney is completely destroyed. Stone formation is found in both kidneys in about 10 per cent of cases. Israel found the condition in 11.2 per cent of 574 cases, and Federoff in 14 per cent of 250 cases. Bilateral stones may cause few or no symptoms. Elderly persons may get along and live a number of years without operation. Operative procedures in persons over 50 years of age who have had trouble for many years entail considerable risk. In early or middle life there is more need for satisfactory renal function; the kidney is still in a stage where regeneration of destroyed tissue may occur, and the risk of operation is less. If the patient is robust and both stones are of moderate size, and if the function in each kidney is approximately equal, primary bilateral operation may be considered, but only under unusual circumstances. In most cases one stone is large, occasionally very large, and occurs in a comparatively functionless kidney; the stone in the opposite kidney may be small. If neither stone is causing acute symptoms, the kidney which is least involved should be operated on first, and this is usually the one which has most recently caused symptoms. The stone in the better kidney is frequently small and free in the pelvis, and if not removed first may cause obstruction, which is more likely to result following the increased activity if the other kidney is operated on first.

When the better kidney is operated on first, if the opposite kidney becomes blocked there is but slight impairment of the general renal function. In this way the function remaining in the more diseased kidney may be utilized during the post-operative period. When the patient has recovered from the operation and the danger of general infection is past, the more diseased kidney may then be operated on and removed if necessary.

The following case of bilateral nephrolithiasis was operated on at the Mayo Clinic by E. S. Judd, who has kindly given me permission to make this report. Complete functional and blood chemistry studies have been made at regular intervals since operation:

Mrs. W. R., aged 32, came to the Mayo Clinic on account of attacks of chills, fever, and pyuria over a period of seven years. During the last few weeks she has had several attacks of dull, aching pain in her right side associated with nausea, vomiting, and frequency of micturition. On examination a mass 12 cm. in diameter was found in the region of the right kidney. The urine contained a large amount of pus. The phthalein was 45 per cent in two hours and fifteen minutes, and an x-ray examination revealed multiple large shadows in the region of the right, and a large, single shadow in the region of the left kidney.

Cystoscopic examination revealed bilateral nephrolithiasis. There was a functionless pyonephrosis on the right side, containing multiple stones which were scattered over a large area. The left kidney was infected, had a normal function, and contained a single stone 2 cm. in diameter.

At operation the right kidney, which was five times normal size and highly infected, was removed. The ureter was 2 cm. in diameter. The largest stone in the kidney

was 6 cm. long, and there was practically complete destruction of the kidney substance.

The patient recovered readily from the operation, and three months later the opposite kidney was operated on. The total phthalein return in two hours and fifteen minutes was 40 per cent. At operation a large abscess was found in the upper pole which contained one stone 2 cm. in diameter and several small stones. The lower pole and middle portion of the kidney were normal to sight and touch. The adrenal was adherent to the abscess area; it was dissected free and pushed back. The abscess area containing the stone was then resected, the line of excision being carried through the kidney just above the normal tissue. About two-thirds of a normal kidney was left after the resection. Several bleeding vessels and an open calyx were sutured over. The edges of the kidney were approximated with a continuous running suture. Several stay sutures of catgut were then inserted.

The first day after operation the patient passed 200 cc. of urine, and her face was somewhat puffy. Fluids were forced by mouth, proctoclysis, and by hyperdermoclysis. The output on the second day was much increased; on the third day, and after that, it was normal in amount. The puffiness left her face on the fourth day and she felt quite comfortable. She drained a moderate amount of serum and urine through her incision for ten days; fourteen days after operation her wound had completely healed. She had no further trouble. Ten months later she was in excellent health and was five months pregnant, in spite of a warning to the contrary. Two months after this she gave birth to a premature child who died one month later. Two years after her second operation she moved her family of four children to California. When last seen in January, 1926, she had gained weight, was able to do all her own housework, and felt better than she had at any time during the last ten years. She had no urinary symptoms and her urine was clear, and her salivary and blood urea normal.

The following table indicates the post-operative course and gives the laboratory data following the operation:

TABLE I

Date	Intake	Output	Blood urea	Salivary urea	Phthalein Pre-operative	Remarks
1924 1/11		Operation			40%	
1/12	2400	250				Face puffy-edematous.
1/13	3200	1065				
1/14	2700	2720	72	75		Temp. 102. White count 12,000. Wound not draining.
1/15	3000	2000				
1/16	3200	2250	92	90		Temp. 99. Wound draining urine freely. Slight urinary drainage.
1/17	3000	1200				
1/18	2380	1000			15%	
1/19	3050	1050	56	56		White count 9600. Wound draining urine. Wound healed, no drainage.
1/25			44	52	25%	
3/2			23	40		
5/1			25	40		
7/15			22	30	45%	
12/26						Seven mo. baby born without difficulty. Baby lived 1 month.
1925 1/15			20	24	50%	Blood pressure normal. Urine, no pus or alb., clear. General health excellent.
2/25				20		
1926 1/26			24	36		Has gained weight. Feels very well.

## COMMENT

After the second operation there was a rather sudden, transient retention of all substances normally excreted by the kidney; this was in contrast to the more selective gradual retention which occurs in uremia. There were none of the convulsive or



gastro-intestinal symptoms associated with uremia. She was remarkably clear mentally and at all times quite comfortable.

The check of the blood urea and salivary urea determinations is of interest in this case. Hench and Aldrich carried out parallel determinations of both the salivary and blood urea in over 900 cases from which they developed their index. Certain salivary constituents have the property of forming compounds with mercury. Of these the salivary urea is the dominating mercury combining element. As urea retention occurs in the body, there is a proportionate increase in the salivary urea, indicated by a rise in the mercury-combining power of the saliva. The mercury-combining power of 100 cc. of saliva measured in cc. of 5 per cent bichloride of mercury is called the "salivary urea index."

At present I use the salivary urea index in all my determinations of urea retention. This test is simple and easily carried out, requiring only a few minutes of time and very little apparatus. It has the further advantage that when boiled the saliva may be sent for long distances, as was done in this case, without deteriorating or detracting from the accuracy of the test.

#### DISCUSSION

MILEY B. WESSON, M. D. (1275 Flood Building, San Francisco)—This report is a very valuable contribution to medical literature for two reasons: First, one and one-third kidneys were removed from a 32-year-old woman within a period of three months, and two years later the patient was still in excellent general health; and second, routine tests of blood urea, salivary urea and "phthalein" tests were continued throughout the period and found to confirm each other.

Czerney in 1887 reported the first case of resection of the human kidney. Dolgoff in 1900 found in dogs with a single kidney that any injury to cortex or medulla of the remaining kidney was fatal. Franklin, however, in 1906 successfully removed at one operation one and three-fifths kidneys from a 16-year-old girl because of a bilateral traumatic rupture. Young, Mursell, König, Lower, Richter, and others have reported unilateral resections for stones.

Federoff reported a series of 241 patients upon whom 250 operations were performed, stones being present on both sides in 14 per cent of the cases. Thomas has recently called attention to the fact that in infants and children 6 per cent of renal stones are bilateral, in adults 12 per cent, and bilateral renal stones are multiple in 66 per cent of all cases; also that bilateral renal stones when multiple or when large are rarely surgical unless an emergency exists. Doctor Scholl's case conforms to this rule as a definite emergency existed, one kidney being entirely destroyed, and the upper pole of the other was occupied by a large abscess.

Theories of renal counterbalance have been of philosophical interest for years, and largely buried in the foreign literature is a mass of experimental data. Simon in 1871 published his experimental studies (which were later confirmed by Tuffier, Paolo-Fiori, Castaigne, and others) of the hypertrophic development and the return of function in the remaining kidney following nephrectomy, and found that the completion of the changes took from twenty to twenty-five days, there being an increase of one-fifth to one-sixth of the original weight of the organ. They demonstrated that the amount of renal parenchyma necessary for the maintenance of health is one-third to one-fourth of the combined weight of the two kidneys. In reality this extreme reduction of the secretory field can suffice for only a few days (due to temporary tolerance of the excrementitious substances which it stores) without grave symptoms of uremic intoxication, unless the remaining portion of the kidney has undergone a compensatory hypertrophy.

Compensatory hypertrophy after a nephrectomy is mi-

croscopically evident within twenty-four hours in changes which stimulate the first stages of nephritis. There is no confirmation of new glomeruli or tubules, but simply an increase in the volume of those pre-existing, according to Golgi, Eckhardt, O. Van der Stricht, Rosenstein, Sacerdotti, and Albarran.

In a great number of subjects hypertrophy of the remaining kidney is already developed even before the removal of the diseased kidney, thus offering the urinary secretion a substitute field already prepared for work. This providential hypertrophy has been reported in the destructive affections of one kidney by Rayer, Storck, Steiner, Neureuter, Valentin, Rosenstein, Rokitsky, Golgi, Nauwerx, Chauffard, and others.

Doctor Scholl's paper is a very valuable contribution to the literature of renal counterbalance as well as to kidney surgery, and the parallel studies of urea retention are most interesting.

H. M. RICHTER, M. D. (104 South Michigan Avenue, Chicago)—Doctor Scholl's paper covers an important field in renal surgery which seems to have been but little touched upon in the published literature. The occasion for resection of a kidney for stone must be relatively infrequent, but when it occurs the surgeon familiar with the possibilities of conservative work will be in a position to give real service to his patient.

E. S. JUDD, M. D. (Mayo Clinic, Rochester, Minnesota)—I am very much interested in Scholl's paper on resection of the kidney for stone. Apparently, from the review of the literature, resection of the kidney was performed more often in the past than recently.

While resection should never be performed for neoplasm or tuberculosis of the kidney, nevertheless there are cases of infection and stone formation where it can be carried out to advantage.

Compensatory hypertrophy has a direct bearing on the results to be expected, and should be considered before performing a resection of the kidney. If the opposite kidney has normal function it is not at all likely that the traumatized remaining segment of a resected kidney would be of any avail. On the other hand, if the resection can be carried out without traumatizing or interfering in any way with the remaining segment, it is conceivable that this part of the kidney might continue to function.

A few years ago Hinman made a most important contribution to the experimental studies of compensatory hypertrophy; these have since been partially confirmed experimentally, and our clinical evidence supports his contention. His experiments show that renal reserve and compensatory hypertrophy effect a counterbalance following unilateral nephrectomy, and also that in unilateral disease without nephrectomy, an additional factor which he calls renal competition is active in the final readjustment. He believes that the unilateral lesion creates an unequal ability to work, one side being healthy and active, and the other diseased and less active, and that such activity is essential to renal growth. The gradually increasing demands on the kidney for work stimulates the tissue to greater activity and results in renal hypertrophy. Hinman also believes that renal atrophy is suggestive of renal inactivity, and that a diseased renal mass in competition with a hypertrophic mate gets less or less stimulation as the opposite side becomes more efficient, and so progressive inactivity leads to a disease atrophy. It is evident, then, that this renal reserve power and compensatory hypertrophy on one side and what he calls renal competition and disease atrophy on the other, is a most important consideration in any surgical disease of the kidney. Undoubtedly, then, in some of the cases in which a resection has been performed there was immediate atrophy of the renal tissue because the opposite kidney was enlarged and perfectly capable of performing all of the work. We have known, ever since Tuffier's work thirty-five years ago, that a person could carry on very well with about 80 to 100 gms. of sound renal tissue, and this case which Doctor Scholl is reporting is further evidence that part of one kidney is sufficient.

On several occasions we have had an opportunity to resect a double kidney, and also to remove a part of a

horseshoe kidney, but we have had only the one case in which there seemed to be a definite indication for the resection of a solitary kidney.

I wish to congratulate Doctor Scholl on this detailed report and the attractive manner in which he has presented the material.

## VINCENT'S INFECTION

ITS SIGNIFICANCE AS THE PRECURSOR OF PYORRHEA  
AND ITS POSSIBILITIES AS A CAUSE OF  
OTHER DISEASES

By ERNEST MADISON BURNS \*

(From the Los Angeles County Public Health  
Department)

DISCUSSION by Charles C. Browning, Los Angeles.

THE recognition of focal infection as an entity has constituted a great forward step in modern medicine. With this fact in mind there is a tendency to get away from generalization both in diagnosis and treatment. In searching for foci of infection attention has been called to those tissues most often involved and to the most common portals of entry of infection. The mouth, nose, and throat are by far the greatest offenders. It is known that most of the acute exanthemata, common colds, tonsillitis, diphtheria, as well as the gastro-intestinal and pulmonary infections gain entry through these exposed surfaces. Diseased sinuses, teeth, and tonsils have been proved to be causative factors in many organic and systemic disorders. In a like manner Vincent's infection may be shown to enter and affect the body.

I have been impressed by the appalling loss of teeth in relatively young people. This has been mentioned and its serious aspects widely published time and again. Someone remarked, more than half seriously, that within a few more generations man may be a toothless animal. This condition prevails among people in all classes of society. It is not so noticeable unless attention is called to it, since the teeth are usually replaced by bridgework or plates of one type or another. Once noticed, the number of people under 35, particularly women, wearing plates or extensive bridgework, has a significance at once impressive and disturbing.

This loss of teeth, admittedly due to infection, when considered from the standpoint of esthetic effect, discomfort and disturbances in digestion, is serious, totally aside from the terrific punishment to which the body has usually been subjected in that period between the beginning of infection and the elimination of the teeth as possible foci.

My attention was called to periodontal Vincent's infection some years ago at Hot Springs, South Dakota. Here a large number of patients were examined and treated, with the infection varying in severity from bleeding or receding gums to actual loosening of teeth. Smear examinations showed fusiform bacilli and spirilla Vincenti. This local prevalence of spirillum minfection or "trench mouth" was

thought to have been introduced by World War veteran patients in a nearby government hospital. After further study I became convinced of a definite relationship between early loss of teeth and Vincent's infection.

I have noticed that many mothers, usually under 35 (my work being with contagious diseases), have receding gums to a greater or less degree. Smears made from 120 of them showed 80 per cent positive for spirilla and fusiform bacilli upon first examination. In addition to these, more than a thousand patients were recognized as suffering from the same infection, but the diagnoses were not confirmed by smear examination. Many patients are surprised when told of an infection, because they had been told that they had no pyorrhea. Others had been undergoing treatment for pyorrhea. One mother with smears positive for Vincent's infection had just concluded a course of dental treatment. The patients showed varying degrees of recession of the gums, loose teeth and even loss of sound teeth, and they represented many nationalities from all walks of life. My findings confirm those of other observers as to the universal prevalence of the spirilla and fusiform bacilli about the teeth. However, my patients have been mostly women, whereas those of most writers have been men, usually soldiers, or children, among whom universal prevalence of these organisms has been considered as being part of the flora of the normal mouth. I consider these organisms universally pathogenic. Recently I have had three patients with marked anemia, apparently secondary to some systemic infection. The three patients had dirty mouths, which proved to be heavily positive to Vincent's organism. They were all under the age of 35 and, in addition to anorexia and anemia, each represented a distinct type. One was "rheumatic," one suspected of being tubercular, although sputum was repeatedly negative, while in the other symptoms indicated disturbances of the gastro-intestinal tract. X-ray showed no root abscesses. The infecting organisms disappeared and all patients improved rapidly under spirochaetocidal treatment.

### PATHOLOGY

In early stages periodontal Vincent's infection is characterized by a recession of the gingival margin of the gums, exposing a characteristic clean-cut margin, typical of spirillum ulceration. Instead of the gum fitting closely about the teeth in the normal, sloping manner, it stands out, emphasizing the line of juncture. There may or may not be tenderness or bleeding of the gums; usually not. The disease is progressive, showing no tendency to be self-limited, its progress varying with the general condition of the individual and with the care of the teeth and mouth. Finally the gingival margin becomes farther retracted until there is the appearance of a ridge at the juncture. In reality this is an undermined margin under which food particles and bacterial forms lodge and, due to improper oxidation, favor the deposition of calcium or tartar. At this relatively advanced stage, or even later, the diagnosis of pyorrhea is usually made. The tartar may be scraped from the teeth without using specific medication, often traumatizing the gums, and thus encouraging extension of the process until the teeth either become loose or the patient develops constitutional

\* E. M. Burns (444 South Pacific Building, Huntington Park, California). M. D. University of Nebraska, 1921. B. S. University of Nebraska, 1919. Graduate study: Internship Nebraska Methodist Hospital, 1921-22. Scientific organizations: Los Angeles Medical Association, California Medical Association, American Public Health Association, Academy of Clinical Medicine and Surgery. Present appointments: Diagnostician, District Health Officer Los Angeles County Health Department. Practice limited to Public Health since November 1, 1923.



symptoms indicative of low-grade focal infection for which the teeth are sometimes extracted, whether abscessed or not. This describes the average case of peridental Vincent's infection.

In addition to this there are many secondary manifestations described by various workers. Of these Vincent's angina is most widely known; next in the matter of prominence at present is noma of cheek or genitalia.

Waldrop reviews the literature on spirochaetosis with regard to certain forms of dysenteric enteritis which respond quickly to arsenical treatment, and urges the study of spirochaetosis in the mouth in this disease. Pilot and co-workers report the frequent occurrence of Vincent's spirillum and fusiform bacillus in the smegma of both male and female. In their experience these organisms were very rare in the vagina, the vagina being acid.

McNeil reports a case of pulmonary spirochaetosis showing bacillus fusiformis and spirillum Vincenti. The patient was suspected of being tubercular, but the suspicion was not confirmed by ten successive sputum examinations. There have been about a dozen similar cases reported in this country, and I have seen one such patient. Barker and Miller report a case of perforating ulcer of the hard palate, negative Wassermann, positive Vincent's. Pilot and co-workers have shown the almost constant occurrence of the spirillum and fusiform bacillus in tonsils, adenoids, and chronic ear infection. Other writers speak of these organisms as having a proven or suspected etiological role in hospital gangrene, fetid abscesses about the mouth or genitalia, in the subpectoral, hepatic, splenic, pulmonary or cerebral areas; mastoiditis, appendicitis, fetid pleurisy, gangrenous ulcers of the penis, certain tropical sores resembling noma, and in various skin conditions. It may be seen from these reports that apparently we have in this infection an organism quite as versatile in its manifestations and in its ability to simulate other conditions as the *Sprochaeta pallida*. I am also suggesting what may be a logical relationship as a causative factor in other conditions long recognized, but of unknown etiology.

It was long ago suggested by some pathologists that hemolysis in pernicious anemia was gastro-intestinal in origin. The characteristic recession of the gingival margins is given as one of the pathognomonic signs. Attention is called to the close resemblance of both the clinical picture and post-mortem appearance to that of surra and dourine in horses, a trypanosome infection. Addison in his original work characterizes pernicious anemia as "a general anemia occurring without any discoverable cause in patients in whom there had been no loss of blood, no existing diarrhea, chlorosis, purpura and no renal, splenic, miasmatic, glandular, strumous or malignant disease." William Hunter claims that a large number of cases often classed as pernicious anemia are really of an infective nature and not related to the true Addisonian anemia, which he regards as a specific glossitis with oral, gastric and intestinal sepsis.

Other writers have called attention to the association of the acute phase of Vincent's infection, such as the angina with certain skin conditions. Why may not some of the chronic skin conditions of unknown etiology, such as psoriasis, pityriasis or vitiligo, be

associated with the chronic phase of Vincent's infection such as occurs about the teeth, just as in the case of the various skin manifestations of syphilis? There is a similar suggested relationship in certain forms of arthritis. Many other conditions such as Hodgkin's disease, which, from their nature and location, point to an original mouth or throat infection, may be placed in this group.

#### ETIOLOGY

Spirilla and fusiform bacilli were first recognized by Miller and later associated with Vincent's angina by Rauchfor. The organisms have been variously described, as a fusiform bacillus and Vincent's spirillum occurring in symbiosis; later by Tunnicliff as a single organism, a fusiform bacillus extremely pleomorphic in form, varying in length, size and appearance, depending on the media and stage of development. The majority of workers, however, favor the older belief, that the cause of Vincent's infection is a spirillum with a bacillus in symbiosis. This theory is borne out by the apparent specificity of the arsenicals in the treatment of Vincent's infection. Koch's postulates have never been fulfilled on any form of Vincent's infection. Therefore, any conclusion as to the etiologic role of bacillus fusiformis and Vincent's spirillum must be based upon clinical evidence, including smear examination, until such time as the life history of the organisms is more completely revealed. Vincent's infection is no doubt spread in much the same manner as the more common infections of the mouth and upper respiratory tract. The bacillus fusiformis and spirillum Vincenti gain a foothold in children, as shown by Pilot and co-workers, in the tonsils and adenoids where they may establish a permanent focus. Dental caries and the loss of the deciduous teeth, producing open wounds in the gums, provide many opportunities for the entrance of these and other infecting organisms. Trauma to the gums, either accidental or due to an overzealous use of the toothbrush or toothpick, also provides vulnerable openings for infection. Traumatization of the gums in dental treatments without careful after treatment may only serve to extend the process. The same may be said of the use of stiff toothbrushes. They are recommended apparently with the idea that they substitute for the roughage diet of earlier generations. The more logical explanation of the dietary relationship is that our present day "refined food-stuffs" may lack vitamins and, perhaps still more important, there is the marked increase in sugar ingestion.

Other conditions may be mentioned as contributing factors in the progress of peridental Vincent's infection. Among them carious teeth and improperly applied crowns serve as lodging places for the infection; malocclusion may lower the resistance of the gums about a particular tooth because of the unequal distribution of pressure in the bite; the use of tobacco may, because of its alkalinity, affect the H-ion concentration of the saliva, favoring both the deposition of tartar and the growth of the bacillus fusiformis and Vincent's spirillum.

The arsenicals have been favored in the treatment of all forms of Vincent's infection. Arsphenamine and neoarsphenamine have been used in 10 per cent solution with glycerine as a local application. These should be used only in fresh solution, as they are

not stable and quickly increase in toxicity upon standing. Fowler's solution locally applied by applicator or toothbrush or as a mouth wash in the strength of a teaspoonful of Fowler's solution to a glass of water is even more often used. Patients with constitutional symptoms should be given either Fowler's solution by mouth, the arsphenamines intravenously or the intramuscular injection of the cacodylates. In conjunction with this active medication the patient should use sodium perborate solution or hydrogen peroxide, potassium chlorate or potassium permanganate solution as a mouth wash. The value of these solutions is due to their properties of oxidation, of course contravening the anaerobic action of the organisms.

#### CONCLUSIONS

It is not my wish to overestimate the pathogenic importance of this infection. However, it is my most earnest desire to emphasize its importance, not only in its obvious relationship as a precursor of pyorrhea, but in its infinite possibilities as causative agent in other conditions of hitherto unknown etiology. I believe that, in order to emphasize its importance to the medical and dental professions, it should be made reportable.

#### DISCUSSION

CHARLES C. BROWNING, M. D. (Merritt Building, Los Angeles)—The influence of infection of peridental tissues on the general health is deserving of most careful attention.

Within the past few years the literature on this subject has been voluminous, and both the dental and medical professions are appreciating more and more the importance of infections of the upper respiratory and digestive tracts. The extent of the influence on the viscera of the thorax and abdomen is being more generally recognized. The therapeutic value of care of primary foci in the treatment of what may be termed secondary lesions in tissues distant from the site of the original foci of infection is also being frequently demonstrated.

That the pus-producing organisms, as streptococci, staphylococci, diplococci, find lodgment in the human body very early in life and persist continuously throughout life, is very generally recognized. That disease is produced by these organisms as a clinical entity is relatively infrequent.

The importance of Vincent's infection is undoubted and is frequently overlooked. However, the prevalence of its existence has not been generally recognized as occurring as frequently as indicated by the author of the paper.

The claim for universal infection and the prominent part ascribed to it in the development of disease, in a discourse prepared with so much evident care as the foregoing, is worthy of consideration. However, I have failed to confirm the existence of these organisms to the extent indicated by the author.

I do not consider the fact that the cases reported by Burns yielded to arsenic treatment applied locally and used systemically as necessarily an indication that the pathological changes were due entirely or primarily to the spirochaeta, nor that the spirochaeta observed were necessarily Vincent's infection. Arsenical preparations administered internally have an influence on the cellular elements of the body in such manner that they raise the general resistance to depressant influences whether bacterial or not. Locally applied, they have a similarly stimulating influence. It is also true that many cases of peridental infection yield to treatment with the aniline dyes and other agents; also by surgical procedure and frequently more readily to medicinal and surgical efforts combined.

The oft-repeated examinations of infections of peri-

dental tissues have shown very early existence of the more common pyogenic organisms. The early period in infancy in which pyogenic organisms have been found to exist in the body is against this theory, which demands further investigation before we can accept Burns' findings. However, I appreciate his work and believe it merits further consideration. It may be found that we have overlooked more frequently than we have appreciated an important factor in the cases of infection of the peridental tissues.

### THE INTRAVENOUS USE OF SODIUM CACODYLATE, MERCUROCHROME-220 SOLUBLE, AND GENTIAN VIOLET IN MALIGNANT ENDOCARDITIS

By WILLIAM H. LEAKE \*

*The results of intravenous therapy with sodium cacodylate, mercurochrome, and gentian violet in eleven cases of malignant endocarditis are reported.*

*Gentian violet and mercurochrome were used in eight cases. Sodium cacodylate was administered to three of the patients receiving dye treatment, and to three who received no other intravenous medication.*

*Ten of the eleven cases reported showed positive blood cultures. Nonhemolytic streptococci were found in nine, hemolytic streptococci in one. All blood cultures which were made following treatment showed an active growth.*

*The results were disappointing: Ten of the eleven patients are known to be dead; one has been lost from observation.*

*From my observation of this small series of cases I am of the opinion that little benefit is to be expected from intravenous dye therapy, or from sodium cacodylate in malignant endocarditis.*

*DISCUSSION by Roy E. Thomas, Los Angeles; Egerton Crispin, Los Angeles; E. Richmond Ware, Los Angeles.*

THE object of this paper is to furnish a brief review of the literature concerning the treatment and results in malignant or ulcerative endocarditis and to report the results of intravenous treatment with sodium cacodylate, mercurochrome, and gentian violet in a series of eleven patients. No attempt is made to describe in detail the pathology or symptomatology of the disease. The terminology is somewhat confusing because of several different names applied to the disease, and I shall not discuss their relative merits. For practical purposes malignant endocarditis is of two types: acute, and subacute or chronic. The subacute or chronic variety is more frequently encountered; it runs a course of six weeks to two or more years, and at some period a positive blood culture always can be obtained if the proper technic is followed. Of the names applied to this condition the more commonly accepted ones are chronic infectious endocarditis, subacute infective endocarditis, subacute bacterial endocarditis, and endocarditis lenta. The organism recovered from the blood cultures is usually streptococcus viridans or, less frequently, pneumococcus; while in the acute variety strepto-

\*William H. Leake (1680 North Vine Street, Los Angeles). M. D. Vanderbilt University, 1916. Practice limited to Internal Medicine. Hospital connections: Los Angeles General and Hollywood hospitals. Appointments: Instructor of Internes, Los Angeles General Hospital; Instructor in Medicine, College of Medical Evangelists; Major, M. O. R. C. Publications: "The Relation of Antigen and Antibody to Serum Disease" (Jour. Experimental Medicine, in collaboration with George M. Mackenzie); "Barbital (Veronal Poisoning)" (Jour. A. M. A., in collaboration with E. R. Ware); "The Treatment of Neurosyphilis" (Jour. of the Tennessee Medical Association, 1921.)



coccus hemolyticus is, as a rule, the causative organism.

The treatment of malignant endocarditis is still very unsatisfactory in spite of extensive investigation, both experimental and clinical. Many different drugs, vaccines and sera have been suggested and used, but the results have been extremely disappointing. Spontaneous recoveries and the so-called "bacteria-free" stage in the subacute type have been noted by several observers. Oille, Detwiler, and Graham reported recoveries in twenty-three patients with streptococcus viridans endocarditis; a few years later twenty of this group were still alive. Forty cases of streptococcus viridans bacteremia with ten recoveries were observed by Warren and Herrick in 1916. Miller and Libman have also reported the recovery of several patients with subacute bacterial endocarditis. Capps had two deaths in eight patients treated with sodium cacodylate. The duration of the disease in the two fatal cases was six and thirteen months, respectively. Sodium cacodylate was given daily (usually intravenously) in doses of from one to four grains (.066 to .26 gm.) until a strong garlic odor was detected on the breath.

Churchman showed that gentian violet and other triphenylmethane dyes were bactericidal and bacteriostatic, especially for Gram positive organisms. He used gentian violet intravenously in patients with septicemia or localized infections by pyogenic cocci with rather encouraging results. However, he later reported that anilin dyes were not very powerful bactericides, but that their bacteriostatic properties were marked. Churchman found that the activity of the dyes was impaired by certain substances in the body, especially the blood serum. He stated that gentian violet in vivo was very unstable, disappearing from the blood stream within two hours after injection.

Young and Hill reported twelve patients with septicemia and local infections treated by intravenous injections of dyes. Seven were given mercurochrome and five received gentian violet; all recovered. In six of those treated with mercurochrome the organism was of the colon group, and in the other a staphylococcus. All five treated by gentian violet were staphylococcus infections. Two cases each of streptococcus hemolyticus and streptococcus viridans septicemias, not included in this series, were treated without success. Young in a more recent article reported 255 cases of various infections treated with mercurochrome. Seventy-two failed to show any improvement, while 108 were pronounced cured. One case of streptococcus hemolyticus septicemia recovered following three injections of mercurochrome. Piper found intravenous injections of mercurochrome of value when used early in certain blood-stream infections. He found it of no value in the treatment of streptococcus viridans septicemia.

Reed and Lum have reported recovery in a case of nonhemolytic streptococcus septicemia following treatment with mercurochrome and gentian violet; three other cases resulted fatally. In several patients treated with mercurochrome, Reed and Lum observed severe stomatitis with hemorrhage, diarrhea, and dysentery, and the appearance of albumin and casts in the urine.

Gentian violet used intravenously was apparently

responsible for the recovery of a case of streptococcus viridans endocarditis reported by Major.

Brill and Meyers report clinical observations made on three cases of bacteremia and two cases of local gonococcal infection treated by intravenous injections of mercurochrome and gentian violet. They concluded, after carefully controlling their observations by cultural checks, that the intravascular injections of the dyes in no way interfered with the progress of the infection.

#### PERSONAL EXPERIENCE

During the past ten months I have observed the effect of sodium cacodylate, mercurochrome, and gentian violet in nine patients with subacute bacterial endocarditis, one with acute nonhemolytic streptococcus endocarditis and one with acute hemolytic streptococcus endocarditis. These patients were in the Los Angeles General Hospital. Sodium cacodylate was administered intravenously in daily doses of three to five grains (0.2 to 0.33 gm.) and with few exceptions the drug was pushed until a strong garlic odor was detected on the breath. Mercurochrome and gentian violet were given intravenously in doses ranging from two to five milligrams per kilogram of body weight. Freshly prepared 1 per cent aqueous solutions were used. The diagnosis was confirmed by blood culture in ten of the eleven patients, and in the eleventh the organisms were obtained from the vegetations at necropsy.

The results were uniformly disappointing: with the exception of one patient who has been lost from observation, ten patients out of this series of eleven are known to be dead. The duration of the disease ranged from two and one-half months to fifteen months in the subacute bacterial endocarditis cases. The two patients with the acute streptococcus endocarditis lived twelve days and five weeks, respectively. In the cases with positive blood cultures, the organisms were practically always recovered from the blood after intensive treatment with sodium cacodylate, mercurochrome, or gentian violet. One patient (case 1) after receiving sodium cacodylate over a period of several months, and repeated injections of mercurochrome and gentian violet showed in his blood culture a heavy growth of streptococcus viridans. This patient was under observation for ten months, the longest period of any in this series.

Sodium cacodylate produced no unpleasant or alarming symptoms except for the so-called "garlic breath." Mercurochrome in the dosage advocated by Young and Hill frequently produced marked salivation, but this was rarely observed when the dosage was reduced. Severe systemic reactions consisting of chills, high fever, and general malaise frequently followed the use of mercurochrome. Except for an intense cyanosis of short duration, gentian violet produced no untoward symptoms. If the drug were injected very slowly, however, the cyanosis was slight. Case reports will be limited to four of the most interesting of the series, and the eleven cases are summarized in the accompanying table.

CASE I—W. R., a white man, aged 25, entered the medical service May 26, 1924, complaining of rapid pulse, chills and sweats, weakness, and fever of six months' duration. He had suffered an attack of endocarditis two years prior to the onset of these symptoms. Examination

and blood culture revealed the typical findings of streptococcus viridans endocarditis.

*Treatment and Course*—The patient was under observation for a period of ten months. During that time he received four intravenous injections (20 cc.) of 1 per cent gentian violet solution, one dose (15 cc.) of 1 per cent mercurochrome by vein, and many intravenous injections of sodium cacodylate. Blood cultures from time to time were always positive for streptococcus viridans. A severe diarrhea was produced by the mercurochrome, but the other medication seemingly produced no ill effects. The patient died at home February 20, 1925. Necropsy was not permitted.

CASE III—L. L., a man, aged 25, entered the eye service August 12, 1924, complaining of blindness of the left eye and poor vision of the right of three weeks' duration. He had also experienced frequent chills and sweats. He gave a history of several attacks of "rheumatism." Examination disclosed a subacute bacterial endocarditis. There were extensive retinal hemorrhages; a diastolic murmur over the aortic area, and a systolic blow at the apex; petechiae in the conjunctivae and in the finger tips. Blood culture showed a pure growth of streptococcus viridans.

*Treatment and Course*—August 16 the patient was given 15 cc. of 1 per cent mercurochrome by vein. There was no reaction. August 20, a second injection of 20 cc. of 1 per cent mercurochrome was given. Blood culture the following day again

showed streptococcus viridans. August 25, another dose of 15 cc. of 1 per cent mercurochrome was administered. The patient was in a state of euphoria. September 4, an injection of 20 cc. of 1 per cent gentian violet was given intravenously. A blood culture at this time was still positive. September 8, a second intravenous injection of 20 cc. of 1 per cent gentian violet was given. September 12, the patient was discharged at his request. He died at home October 19, 1924.

CASE VII—C. B., a married woman, aged 19, was admitted to the medical service September 10, 1924, complaining of fever, chills and sweats, palpitation, and pain over heart, of three weeks' duration. She had not felt well for several weeks prior to this time. She gave a history of diphtheria, influenza, and frequent sore throats. Examination revealed the typical findings of subacute bacterial endocarditis. Blood culture showed a pure growth of nonhemolytic streptococcus.

*Treatment and Course*—September 16 five grains of sodium cacodylate were administered by vein, and daily thereafter for twenty-three days, when medication was temporarily discontinued because early signs of overdosage were noted. Smaller amounts, three grains daily, were given, beginning October 9 and continuing for four days, after which no more was given until October 23. In all this patient received 144 grains (9.6 gm.) of sodium cacodylate without affecting the positive blood culture. September 24, a

Patient	Age	Sex	Period of Observation	Hist. of Rheum.	Temp.	—Embolic Phenomena—					Blood Cultures	—Treatment Result—	
						Valves Affected	Skin	Kidneys	Spleen	Brain			
I W. R.	25	M.	11 months	+	97.6° to 104°	Mitral	+	+	+	0	Strep. Viridans	Gen. Violet Mercuro. Sod. Cacodyl.	Died
II M. E. B.	60	F.	2½ months	0	97.6° to 101.6°	Mitral	+	0	0	+	Strep. Viridans	Gen. Violet Iron Cacodyl.	Died
III L. L.	25	M.	2 months	+	98.6° to 103.4°	Mitral and Aortic	+	+	+	0	Strep. Viridans	Gen. Violet Mercuro.	Died
IV H. T.	40	F.	1½ months	0	98.4° to 101.4°	Mitral	+	0	0	+	No Growth	Sodium Cacodylate	Died
V W. V.	40	M.	2 months	+	98.2° to 105°	Mitral and Aortic	+	+	+	0	Non-Hem. Strep.	Mercuro. Sod. Cacodylate	Died
VI M. S.	56	F.	2 months	0	97° to 102°	Mitral	+	0	+	0	Non-Hem. Strep.	Mercuro. Trans- fusion	Died
VII C. B.	19	F.	2 months	0	97.2° to 103.6°	Mitral	+	0	+	0	Non-Hem. Strep.	Mercuro. Sod. Cacod. Tonsillectomy	Died
VIII M. B.	50	F.	2 weeks	0	97.4° to 101.8°	Mitral	+	+	+	0	Strep. Viridans	Sodium Cacodylate	Died
XI J. L.	43	M.	12 days	+	97.6° to 101.8°	Mitral	+	0	0	0	Strep. Viridans	Sodium Cacodylate	Lost from Obs.
X B. H.	14	M.	1 week	0	97° to 106°	Tricuspid	+	+	+	+	Non-Hem. Strep.	Mercuro. Gentian Violet	Died
XI A. A.	31	F.	3 weeks	0	98° to 105°	Mitral	+	+	+	0	Hemolyt. Strep.	Mercuro. Gen. Violet. Transfusion, Magnesium Sulph., Anti-Strep. Serum, Auto. Vacc. Neo-arsph.	Died



tonsillectomy was performed under local anesthesia. Postoperative convalescence was uneventful. October 13, the patient received 15 cc. of 1 per cent mercurochrome by vein. There was no reaction. Blood culture showed a heavy growth of nonhemolytic streptococcus. The patient grew progressively worse, death occurring October 27. The diagnosis was confirmed at necropsy.

**CASE X—B. H.,** a boy, aged 14, was admitted to the surgical service November 14, 1924, with an infected right hand. Ten days before admission he injured his hand while cranking an automobile. Five days later he experienced pain in the right wrist and hand, followed by chills and high fever. Examination revealed a well-developed, acutely ill boy with a temperature of 104. There was swelling and redness of the dorsum of the right hand and wrist. The leukocyte count was 50,000, with 85 per cent polymorphonuclears. The urine contained a trace of albumin and a few casts. A diagnosis of streptococcus septicemia was made.

**Treatment and Course—**November 14, a dose of 25 cc. of 1 per cent mercurochrome was given intravenously. This was followed by an immediate rise in temperature, and by diarrhea the following day. November 15, the patient was no better. The right wrist was incised and a small amount of pus was obtained. Culture of the pus showed a non-hemolytic streptococcus. November 16, an injection of 25 cc. of 1 per cent gentian violet was administered intravenously. There was a slight febrile reaction. November 17, the patient received 15 cc. of 1 per cent gentian violet by vein. Blood culture showed a heavy growth of nonhemolytic streptococcus. November 18, a second dose of 25 cc. of 1 per cent mercurochrome was given. This was followed by a severe chill and rise in temperature. November 21, the patient died suddenly while having a convulsion. Necropsy revealed a generalized septicemia and an acute ulcerative endocarditis.

#### DISCUSSION

**E. RICHMOND WARE, M. D.** (507 Professional Building, Los Angeles)—Mercurochrome intravenously has done a vast amount of damage in the last two years. I wish we had records of more cases of this nature. Leake does not describe the condition of the bowel and kidneys in his autopsied patients. A recent report in the *Journal of the American Medical Association* from the office of the Chief Medical Examiner of the City of New York and from Bellevue Hospital is most interesting in this connection. The necropsies of five deaths following sepsis which had been treated by mercurochrome intravenously are described. They all showed kidney degeneration and ulcerative colitis typical of acute mercurial poisoning. Chemical analysis of the viscera showed large amounts of mercury. This series has since been increased to twelve.

A stomatitis and diarrhea is the rule rather than the exception following mercurochrome given intravenously in the doses originally recommended by Young. In my experience I have never been convinced of its value, and I have seen several instances of extreme toxic reactions. Personally I believe its use is not warranted. Further reports similar to this will do much to stop its indiscriminate and dangerous use.

**EGERTON CRISPIN, M. D.** (Pacific Mutual Building)—Doctor Leake has presented some interesting data. His work is to be commended. His results are in general accord with most of the reports that are coming to our

attention regarding this type of therapy in the group of streptococcus infections. A few patients have been reported as having gotten well. Most of the relatively large number of patients that have not been benefited and have since died are not reported. It would seem that with the damage attendant with mercurochrome its use should be discouraged, except where consultation and institutional care are possible and to instances where the family having the nature of the illness explained are willing to record their desire that this therapeutic procedure be used as a possible final resort. Gentian violet and sodium cacodylate, apparently less harmful, offer but little. The public attitude toward the medical profession, particularly where sera and chemicals of indefinitely determined possibilities are used, is far from favorable. Much more harm than good often may be done by too free use of these chemicals as therapeutic measures, unless they offer more than at present.

**ROY E. THOMAS, M. D.** (1136 West Sixth Street, Los Angeles)—When one considers the pathology of chronic bacterial endocarditis it is difficult to understand how the lesions could be affected by mercurochrome or other similar drug in any concentration which is safe to give. Solutions of from 3 to 5 per cent of mercurochrome can be painted on tonsils infected with streptococcus without materially altering the course of infection.

Animal experimentation has shown little to encourage us in expecting much from dyetherapy in the pyogenic infections. When this treatment was first advocated there was a rush by enthusiasts to publish reports of startling cures. A few carefully worked up series of cases such as the one reported by Doctor Leake in this paper will serve to put the intravenous use of mercurochrome in endocarditis and blood-stream infections where I believe it belongs, in the discard.

The use of sodium cacodylate as advocated by Capps is certainly safer, but in my own hands the results have been disappointing.

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An unknown reader sent us a copy of "The Independent Reporter" (Skowhegan, Maine), with a marked editorial, from which the following is taken:

"The matter of food, more or less neglected until the present era, has of late been made the subject of the most exhaustive research. The results are of the highest value. We are so much in, or upon, the margin of the research period, however, that it is difficult to make wise use of the immense mass of information dumped upon us from every side. The imagination could not build theories more grotesque or more highly dangerous than can be found boldly recommended and seemingly on good authority. Common sense and caution are needed as never before.

"There is one danger signal which I regard as infallible. If an enthusiastic food specialist tries to bring the medical fraternity into disrepute, to impugn their motives, or question their intelligence, little or no attention should be paid to him."

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Two sets of problems confront the medical profession today. One is internal and has to do with ethics, conduct, advertising, organization, and medical education. Many other items might be added to this brief list. The other is external and may be summed up in the words "state medicine." Insidiously and slowly, without appreciation of their ultimate effect on medical practice, by their often well-meaning but thoughtless sponsors, or boldly and with deliberate intent to work quickly a revolution, certain movements have been allowed to gain headway or have been instituted which if unchecked will lead to the socialization of the practice of medicine.—L. L. Bigelow, Ohio State M. J.

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Only one or two of the military surgeons of our Civil War employed a clinical thermometer. These men were probably looked upon as ultra-scientific and therefore impractical. In 1868, however, Wunderliche's classic work on clinical thermometry appeared, and this finally convinced the medical world of the importance of the thermometer in medicine.—Rufus Cole, *Science*, August, 1926.

## A STUDY OF SYMPTOMS OF EXOPHTHALMIC GOITER WHICH ARE PRACTICALLY DIAGNOSTIC

By ARTHUR E. MARK \*

*The usual textbook symptoms of exophthalmic goiter, with the exception of bilateral exophthalmos, are not of much diagnostic value.*

*First impressions of patients, especially regarding the pulse rate and blood pressure, may be very misleading, as attested by frequent pulse rates of 120 in nervous individuals, which are found to be normal on a subsequent day.*

*Pulse rates which are persistently above 80, especially during sleep, should be looked upon with suspicion, and every effort made to rule out disease, especially hyperthyroidism.*

*Very occasionally a patient with exophthalmic goiter may have a low pulse rate, one which is really within normal limits.*

*Quadriceps power loss is one of the most important diagnostic symptoms of exophthalmic goiter.*

*A feeling of sustained warmth for weeks or months in the absence of fever is practically pathognomonic.*

*A history of ravenous appetite is practically always present at some time during the disease. Weight loss, together with a ravenous appetite, are only to be found in patients with hyperthyroidism and diabetes mellitus.*

*Exophthalmic goiter patients present that tendency to develop remissions during which time they may be only slightly toxic, or apparently absolutely free from toxicity.*

*Thrills and bruits over the superior thyroid vessels occur in 60 to 80 per cent of cases, and when louder here than over the inferior thyroid vessels are practically diagnostic.*

*The tendency for exophthalmic goiter patients to develop crises is quite marked.*

*Properly done metabolic readings, repeated as needed, offer the most absolute method of diagnosis, especially in border-line cases.*

*A metabolic reading of plus 15 to plus 20 in the absence of any findings of exophthalmic goiter on rechecking under suitable conditions usually proves to be normal.*

*Response of exophthalmic goiter patients to Lugol's solution amounts almost to a therapeutic test. From a diagnostic standpoint a therapeutic test, however, is far from the ideal.*

DISCUSSION by Rea Smith, Los Angeles; W. W. Washburn, San Francisco.

THE exact cause of exophthalmic goiter has as yet not been determined. That there is an excessive amount of thyroxin which becomes disseminated throughout the system with a special predilection for the nervous system is quite evident. The reason for the overproduction is, no doubt, to be found in an unstable thyroid molecule with the iodine content playing a major role. Improvement following iodine therapy in the form of Lugol's solution, as brought out by Plummer, certainly emphasizes this fact.

In the consideration of the symptomatology too much emphasis should not be placed upon the so-called cardinal symptoms, namely, exophthalmos, nervousness, tremor, tachycardia, and weight loss. While being very common symptoms, with the exception of exophthalmos, they are in themselves not as valuable from a diagnostic standpoint as several

other symptoms and findings which I wish to bring out.

Exophthalmos, especially if bilateral, is a very important finding and occurs in approximately 60 per cent of cases. When present the commonly described eye signs such as Von Graef's, Stellwag's, and Mobius are usually easily elicited.

The attendant excitement and embarrassment which is naturally displayed by certain individuals when first examined is often in itself a sufficient stimulus to accelerate the pulse rate. Although well known, this may be overlooked and sometimes misinterpreted. Confusion in these cases is greatly augmented by the presence of a thyroid which might be interpreted as being enlarged, and really often is enlarged, but without the accompanying symptomatology which one could interpret as being due to hyperthyroidism.

In certain individuals of a neurotic type and with no definite pathology a normal pulse rate may be obtained only during the period of sleep. Again patients of this type may present a pulse rate of 80 to 90, which is normal for them and which may be present at all times. Generally speaking, however, pulse rates which are persistently above 80 should be looked upon with suspicion, and every effort should be made to rule out any possible pathology, especially thyroid disturbances. Very occasionally a patient with exophthalmic goiter may have a low pulse, one which is really within normal limits.

One can readily see that the pulse rate in itself is far from diagnostic. Observation of it over a period of time in border-line cases gives valuable information, but in the final analysis it should only occupy a part of our attention. The picture as a whole, with the careful analysis of all the symptoms and evidence, is of paramount importance.

Such symptoms as tremor and nervousness in themselves have little diagnostic significance. That peculiar restless type of nervousness associated with unbounded confidence as manifested by the exophthalmic goiter patient in contradistinction to the neurasthenic with the assumed attitude of inability to do a thing even before trying is very important. This has been clearly described by W. A. Plummer and re-emphasized by me. This can be admirably tested out by asking both types to mount a high step, in which event the former finds the task impossible without assistance, while the latter accomplishes it without difficulty. Here we have manifested one of the very cardinal and diagnostic symptoms and designated as "quadriceps power loss." It is needless to say that its degree is in proportion to the amount of poisoning.

In exophthalmic goiter the circulatory mechanism is markedly disturbed. The peripheral vessels are dilated; in other words, we have an open periphery which allows for an increased elimination of heat, and from a blood pressure standpoint, a lowered diastolic reading. The patient as a result perspires freely and complains of feeling warm. This is not a temporary disturbance measured in periods of minutes or hours, but in periods of weeks or months. In other words, the patient in an ordinary room temperature feels continually abnormally warm. This is an extremely important symptom, and might be considered in the absence of fever as pathogno-

\* Arthur E. Mark (1680 N. Vine Street, Los Angeles, California). M. D. University of Minnesota. Practice limited to Internal Medicine. Post-graduate work: University of Minnesota, 1916; Mayo Clinic, 1917 to 1920. Hospital connections: Los Angeles County, St. Vincent's and Hollywood hospitals. Publications: "A Study of the Severe Secondary Anemias" (Minnesota Med., 1922, 536-44); "The Value of the Basal Metabolic Rate in General Medical Practice" (Minnesota Med., February, 1924, 86-9); "The Relationship Between the Dentist and the Diagnostician or Internist" (Pacific Dental Gazette, June, 1925, 284-94).



monic. As exophthalmic goiter patients do not present a fever unless there is an accompanying infection, such as follicular tonsilitis which they are especially prone to, the feeling of warmth has an added significance and can only be explained on the basis of an increased metabolism, the latter, which in 95 per cent of patients without fever, as brought out by Boothby, speaks for exophthalmic goiter or thyrotoxic adenoma.

The increased metabolic rate which these patients present naturally results from an increased oxidation. To supply this destructive process nature compensates to some extent by encouraging the individual to take more food. Here we have another important symptom, namely, a ravenous appetite, which is present at least at some time and often throughout the course of the disease.

Nature does not absolutely compensate, however; in other words, the food intake, even though in excess of the normal, cannot keep pace with the catabolic process and we have another symptom, namely, weight loss, which together with ravenous appetite and an absence of any diabetic tendency is again practically pathognomonic of hyperthyroidism, as increased food intake with coincident weight loss is only to be found in this condition and in diabetes.

One of the peculiar tendencies of exophthalmic goiter is that it occurs in phases. In other words, there is that tendency for remissions during which time the individual may be only slightly toxic, or absolutely free from toxicity. The latter is open to question, and it is more likely that during remissions the disease is slightly active, but not sufficiently so to be productive of symptoms which we associate with frank hyperthyroidism. It is safer to assume that once hyperthyroid always hyperthyroid until measures for its eradication are carried out. After each wave of hyperthyroidism at least the inroads of the disease become more marked. From a diagnostic standpoint, at least, periods of lessened activity, or remissions, again speak strongly for exophthalmic goiter.

The physical examination gives very valuable evidence, as already stated, exophthalmos, especially bilateral, together with the eye findings, is absolute evidence. One should not mistake naturally prominent eyes for exophthalmos. A starry expression of the eyes is very suggestive. The thyroid usually has a granular feel. Its size may vary greatly, at times a barely palpable thyroid being present in patients with markedly increased metabolic rates.

The presence of thrills and bruits over the superior thyroid vessels occurs in about 60 to 80 per cent of cases, and when present are practically diagnostic. When louder over the inferior thyroid vessels, or when varying in intensity, being at times barely audible, their presence is of negligible value from a diagnostic standpoint.

The heart may or may not be enlarged. The cardiac damage is myocardial in character. A hoarse blowing systolic murmur loudest over the pulmonic area is often to be found.

While the toxemia involves all the muscles of the body, resulting in a generalized weakness, there is a special tendency for the quadriceps group to be involved much out of proportion to the other muscles.

Symptoms such as dyspnoea, palpitation, vomiting

and diarrhea, generalized loss of strength, headache, pressure and fullness over the thyroid, choking spells, etc., are usually present, but individually or even collectively are not diagnostic.

The tendency for exophthalmic goiter patients to develop crises is quite marked. The nature of the toxemia; the condition of the thyroid with its increased vascularity especially at this time allows for an explosive type of toxemia, which at times is of such a degree as to overwhelm the individual and thus result in the marked symptoms associated with a crisis. Contrary to the usual belief, patients in this state, as well as all patients with exophthalmic goiter, as already mentioned, do not have an elevation of temperature unless some complicating condition, more often a follicular tonsilitis, exists.

In the final analysis the metabolic reading is of vital importance in the determination of the degree of toxicity and especially in the diagnosis of borderline cases. According to Plummer, a clinical diagnosis cannot be made until the metabolic rate is 15 or above. Thus one can readily see that the metabolic reading is very important.

Repeated readings in doubtful cases and especially the carrying out of the test by one especially trained and under normal conditions is of vital importance. In a previous article I stated, "I have repeatedly seen patients who have previously been considered hyperthyroid on the basis of one reading, upon whom a subsequent reading would, I am sure, have been normal. As a matter of fact, a rate of plus 11 to plus 20 or 25, in my experience, on a rechecking proves in most cases to be within normal limit. There are isolated cases of hyperthyroidism presenting a low reading, but in these the symptomatology is in harmony with the rate and, as a matter of fact, they are quite often recognized clinically."

These points cannot be re-emphasized too frequently, as the tendency to base false conclusions on poorly carried out metabolic readings is becoming increasingly more prevalent.

That the portable apparatus adds to false interpretations cannot be denied, and especially when the test is made by one not conversant with the work.

Increased rates are constantly present in exophthalmic goiter and hyperfunctioning adenomas, in the active stage of acromegaly and in fevers. They may be found occasionally in other diseases, such as essential hypertension, pernicious anemia, leukemia, diabetes, bronchial asthma, decompensated hearts, tuberculosis, and carcinomas. In these conditions a rate of over plus 20 to plus 25 is quite unusual, although at times patients with pernicious anemia and leukemia may present a reading of plus 30 to plus 35. Little difficulty should be experienced, however, in differentiating these conditions from those of exophthalmic goiter.

The rapid response of exophthalmic goiter patients to Lugol's solution gives us what practically amounts to a therapeutic test. However, resorting to a therapeutic test to establish a diagnosis is, naturally, far from the ideal and this should rarely be necessary.

A discussion of the symptomatology as given really is also a discussion of the differential diagnosis. The conditions which exophthalmic goiter is most often confused with are neurasthenia and allied conditions,

such as neuro-circulatory asthenia, effort syndrome, as well as tuberculosis, and thyrotoxic adenoma. The latter has been established as a definite clinical entity by H. S. Plummer. It might be well to give some of the findings in this condition which differentiates it from exophthalmic goiter.

Adenomata have their origin around the 18th or 20th year and a period of fourteen to sixteen years ordinarily elapses before toxicity begins. Approximately only 10 per cent become toxic. Iodin therapy is absolutely contra-indicated in patients with non-toxic or toxic adenomata, as in the former toxicity may be initiated, while in the latter it may be aggravated. Where a superimposed exophthalmic goiter exists iodine preparations may be tried. Also where the diagnosis has not been definitely established between the two syndromes. This should be a rare exception, but does occur, especially in patients with exophthalmic goiter having a thyroid gland containing nodules.

Weight loss is more gradual, but may be extreme in severe cases. A ravenous appetite and feeling of warmth may be present, but not as constantly as in exophthalmic goiter patients. The increased diastolic blood pressure does not allow for the open periphery and the resultant amount of feeling of warmth. The quadriceps power loss is usually present. Nervous symptoms are not as marked. Crises ordinarily do not occur and remissions are not present, the disease being progressive. The physical examination does not show exophthalmos. Thrills and bruits are absent. Adenomata are easily distinguishable from the diffuse hyperplastic gland of the exophthalmic goiter patient.

In thyrotoxic adenoma also the heart is primarily affected; the disease is insidious in onset; and arterial changes occur, as manifested by increased diastolic and systolic blood pressure readings. Metabolic readings are not ordinarily as high. Ligations give practically no improvement. These are the most common differential points.

It must always be remembered that exophthalmic goiter has a symptomatology of some duration. The patient with this does not feel well today and poorly tomorrow, but there is a sustained feeling of ill health measured in periods of months and not in periods of hours or several days, as in the neurasthenic. It can readily be seen that the symptomatology of exophthalmic goiter, while diverse, still has certain symptoms such as the feeling of sustained warmth without fever; ravenous appetite with loss of body weight; quadriceps power loss; tendency to remissions, etc., which, one might say, are often individually and certainly collectively diagnostic.

#### DISCUSSION

REA SMITH, M. D. (Medical Office Building, 1136 West Sixth Street, Los Angeles)—Doctor Mark has given us a very clear and exhaustive description of the various signs and symptoms of exophthalmic goiter, all of which are important in the incipient and border-line cases.

Basedow's disease is characterized by marked waves of remissions and exacerbations. It has been recognized for years by surgeons that the time for operation was at the bottom of the wave, and the older surgeons became very expert in determining the amount of toxicity by the symptomatology. Now with the basal metabolism test we have a more positive means of determining the position of our patient in relation to the waves of toxicity.

The border-line and incipient cases are subject to the

same remissions and exacerbations as the fully developed cases, and I think that the failure to remember this fact has much to do with the missed diagnoses and diagnostic controversies. Patients will go along free from symptoms, except perhaps for a slightly accelerated pulse or a pulse rate accelerated by too slight nervous stimulation when an emotional disturbance precipitates a shower of real symptoms. The muscular weakness as demonstrated by quadriceps power loss is probably the most constant sign during the remissions.

The failure to diagnose exophthalmic goiter is not to my mind so disastrous as the failure to differentiate between a group of symptoms well developed due to exophthalmic goiter from an equally well-developed group of symptoms due to thyrotoxicosis from a degenerating adenoma. The delays of medical treatment and therapeutic tests in these cases do patients infinitely more harm than in true exophthalmic goiter.

WILLIAM W. WASHBURN, M. D. (Fitzhugh Building, 380 Post Street, San Francisco)—Doctor Mark has given us the essential differential points between hyperthyroidism due to exophthalmic goiter and adenoma.

While exophthalmos is said to be present in but 60 to 70 per cent of proven Basedow's disease, it seems altogether too low unless we include cases in their very incipency. Exophthalmos, though sometimes waiting to make its appearance in the secondary stage of the disease, is with "tumor" and tachycardia the most important of the so-called cardinal signs and symptoms. I have seen but one patient with a toxemia sufficiently severe to warrant operation in which exophthalmos was absent. It is likely that many cases in which exophthalmos is absent, in the presence of thyrotoxicosis are not a true Basedow but adenomata which have not been recognized.

I have seen patients in thyroid crises with high temperature which could not be explained except upon the basis of extreme thyrotoxicosis. Here we have an extremely high metabolic rate, and with these rapid chemical processes heat production is not counterbalanced by heat dissipation through physiological processes as body radiation, sweating, respiration, etc.

Mark has emphasized the marked variations which are so frequently observed in pulse rate, blood pressure, and basal metabolic readings. The nervous and mental state in this disease is characterized by emotionalism, irritability, restlessness and instability, and all of these features are subject to wide variations. The pulse rate and blood-pressure reading taken at the first office visit is most unreliable, often 20 to 30 points higher than when obtained after the patient has become accustomed to the office environment or when taken at the home.

Basal metabolic determinations as pointed out by Doctor Mark must often be repeated. One is often to be misled here as with similar laboratory proceedings in other fields of medicine; yet taken in conjunction with other clinical signs and symptoms it is the best guide we have to determine if hyperthyroidism is present as well as its severity.

Weight loss and increasing appetite are important signs secondary and proportionate to our elevated metabolic rate; likewise "quadriceps power loss" is an indication of generalized muscular weakness, an important and almost constant finding which is too frequently overlooked. It is in the border-line case that all the signs and symptoms which Mark has elicited will help to establish a correct diagnosis. While some of these border-line cases, which are of course incipient cases, may remain border line for some months, this is not the rule; while in the course of a few weeks or months, a superimposed acute infection, psychic shock or overwork, our diagnosis is no longer in doubt.

DOCTOR MARK (closing)—The symptoms which I have outlined as being practically diagnostic of exophthalmic goiter were first brought to my attention in 1917 while in the goiter department at the Mayo Clinic. H. S. and W. A. Plummer had repeatedly emphasized the importance of these symptoms, and had developed them after observation of a large number of patients. As some physicians are unfamiliar with these symptoms, and as I have not seen mention of them made in textbooks, I considered it advisable to discuss them.

I cannot agree with Doctor Washburn regarding his statement of exophthalmos. Charles Mayo places the



number of exophthalmic goiter patients developing this findings at around 60 per cent. In fact the frequency with which exophthalmic goiter exists in patients showing no exophthalmos gives one the impression that the syndrome is improperly termed. What I wish to bring out especially is that true exophthalmic goiter patients often, irrespective of the degree of severity, in approximately 40 per cent of cases, never develop exophthalmos. True thyrotoxic adenoma never develop exophthalmos unless exophthalmic goiter is superimposed.

I also disagree with Washburn regarding the presence of an increased temperature in patients with exophthalmic goiter. As brought out in my paper, an increase in temperature does not occur from the hyperthyroidism unless an accompanying infection, more often a follicular tonsillitis, exists. Confusion in this respect has been due largely to the fact that patients with exophthalmic goiter have an increased metabolism reading and subjectively feel warm and perspire.

## INFECTIOUS MONONUCLEOSIS

### WITH REPORT OF FIVE CASES

By H. E. BUTKA \*

*Infectious mononucleosis is a definite disease entity. Its onset and general findings are somewhat similar to acute lymphatic leukemia. The early enlargement of the lymph nodes, the sore throat, often with the findings of streptococci on culture, the marked increase of the total white cell count, the brief duration of the high count, the inversion of the ratio of the polynuclears and the mononuclears, the gradual return to normal, with absence of gingival and subcutaneous hemorrhages and any marked anemia, serve to give us a picture that should not be confused with other more serious conditions.*

DISCUSSION by Newton Evans, Loma Linda; A. M. Moody, San Francisco; Gertrude Moore, Oakland.

**D**URING recent years several articles have appeared in various medical publications describing infectious mononucleosis under various names. Bloedorn and Houghton suggested the name, acute benign lymphoblastosis; that most commonly used in America during recent years, infectious mononucleosis, was suggested by Sprunt and Evans in 1920. These authors, as well as many others, believe the condition is synonymous with a disease better known by our older colleagues under the name glandular fever, originating with Pfeiffer in 1889.

It is interesting to note that the disease appears in epidemic form, somewhat similar to influenza. During a period of some twenty years the disease was extremely rare, and only in the last few years has the attention of physicians again been called to it.

There is a noticeable similarity in the blood findings of this disease and of certain types of leukemia. Consequently, several reports of patients suffering from leukemia with recovery, unfortunately have gained entrance to medical literature.

Morley and Tidy traced the history of infectious mononucleosis to 1921, and Tidy later discussed an interesting epidemic of twenty-four cases.

In a recent article Ruth Gilbert and Marion B.

Coleman gave an account of an epidemic of glandular fever, covering a period from October, 1923, to May, 1924, with partial laboratory findings in over one hundred cases. However, only a few cases were satisfactorily studied.

Infectious mononucleosis is a disease entity belonging to the acute infectious and contagious diseases. Its incubation time is about twelve days. It affects children and young adults, but may affect older individuals. Many of the cases reported were medical students. The chief findings are: a generalized enlargement of the cervical glands, with a less constant and marked enlargement of the axillary, inguinal and abdominal lymph nodes, and splenic enlargement. The glands may be tender but are not painful. The fauces are reddened, are at times covered with what appears to be a membrane, and may be acutely painful. There is a preliminary period of malaise. The glandular enlargement appears about the third day and reaches a maximum in from one to three days. With the glandular enlargement there is a pyrexia, which is usually about 103, but may reach 105 for a day or two. It rarely exceeds 100 for more than a week. The prominent glands may subside in from five to fifteen days but may relapse, or if unilateral may occur on the opposite side. Suppuration is extremely rare and when it occurs is due to secondary infection. Glands may remain palpable for several weeks, occasionally for months. After the acute stage there is usually a prolonged period of depression for weeks or months, with some anemia. Recovery is finally complete with a negligible mortality. Occasionally there is a complication of hemorrhagic nephritis, usually without other signs of kidney disease. This occurs in about 6 per cent of cases.

The leucocyte count is increased in all cases during a definite but short period of the earlier part of the disease, the highest total count reported being 35,000, while the highest percentage of mononuclear cells found was 97.5 per cent.

In Longcope's series of ten cases reported in 1922 a rather comprehensive study was made. He described the following histologic characteristics of the mononuclear cells of the blood:

1. "A small mononuclear leucocyte identical with the small lymphocyte seen in the normal blood."
2. "A large mononuclear cell identical with the large mononuclear and transitional types found in normal blood."
3. "Mononuclear cells of a type not usually found in normal blood."

"It is the third type of cell that predominates and to which particular interest is attached. In the cases reported, these cells were somewhat larger in size than the small lymphocytes and contained oval, kidney-shaped, slightly lobulated or Reider-typed nuclei, staining deeply with Wright's stain. They were usually without definite nucleoli and were often concentrically placed in the cell. Sometimes the nucleus almost filled the cell, but at other times it was surrounded by a fair amount of basophilic protoplasm of ground glass appearance, which did not contain any definite granules. These cells varied somewhat in size and shape, and frequently it was difficult to differentiate them on the one hand from small lymphocytes and on the other from the large

\* **Hersel E. Butka** (314 North State Street, Los Angeles). M. D. College of Medical Evangelists. Director of Laboratories, White Memorial Hospital, and Roosevelt Hospital; Associate Professor of Pathology, College of Medical Evangelists. Previous publications: Four short articles published in the A. M. A. Journal, Laboratory and Clinical Medicine, and California and Western Medicine. Practice limited to Clinical Pathology.

mononuclear cells. Occasionally mononuclear cells were observed with eccentrically placed nuclei and deeply stained basophilic protoplasm. Such cells resembled very closely the so-called stimulation form of Turck. In three cases the oxidase reaction showed mononuclear cells free from granules. Though a few of these mononuclear cells presented somewhat the appearance of myeloblasts, the absence of the oxidase reaction served to differentiate them from this cell, and it seems highly unlikely that they are derived from the myeloid tissue and much more reasonable to suppose that they arise from true lymphoid tissue."

With convalescence and a decrease in the leucocytes these abnormal cells gradually disappear from the blood.

Lymph nodes were exercised in two of Longcope's cases. The sections revealed hyperplasia of a type simulating Hodgkins disease.

To the sixty or more cases reported in the last few years with more or less complete laboratory data, I wish to add five that have come to my attention during 1923 and 1924. Not being hospital patients much desirable data is missing, sufficient, however, being present to establish a definite diagnosis.

#### CASE REPORTS

CASES NOS. 1 AND 2. Miss L. H. and her mother, February, 1923.

Daughter ill first for a period of about two weeks. Began with glandular swelling in the cervical region. Soreness of tonsillar and throat regions developed about two days after the glandular enlargement; no leucocyte count made; convalescence rapid.

Mrs. H., age 65, housewife. Onset about two weeks following the daughter's illness with glandular swelling, a sore throat developing two or three days later. Edema of pharynx so marked that she could scarcely swallow water. Cultures negative for diphtheria. White count made at height of illness revealed 29,000 leucocytes, but no differential slides were obtained at this time. Two days later count had dropped to below 20,000, at which time a differential count was made, revealing mononuclears amounting to approximately 45 per cent. Recovery fairly rapid, but requiring about four weeks in all, patient being confined to her bed for about two weeks.

CASE No. 3. Mr. J. W. H., age, 21, male, American, student. Onset rather gradual with symptoms of la grippe or cold. After these symptoms persisted for three or four days he began to develop enlargement of cervical, axillary, and inguinal glands. Two or three days after this swelling came on, throat became sore and swollen with lesions confined chiefly to the tonsils. Temperature varied up to 104 and 105, and patient became delirious. Jaundice developed with marked tenderness and enlargement of liver and spleen.

At this time, November 13, 1923, blood count revealed the following: white count, 48,000; polynuclear cells, 12 per cent; small lymphocytes, 15 per cent; large lymphocytes, 48 per cent; large mononuclears, 21 per cent; Reider cells, 3 per cent; eosinophiles, 1 per cent; making a total of mononuclear cells of 87 per cent.

During the course of the disease, patient had three epileptiform seizures, lasting only a few minutes each time. An eruption about November 18 which simulated measles with a slight suggestion of scarlet fever. This subsided in a few days and patient began to exfoliate. This continued on for about two weeks, much like scarlet fever, with sheets of scales coming off the hands and feet.

Convalescence rapid and blood count made six weeks after onset of the disease was normal.

CASE No. 4. Dr. D. D. C., physician caring for cases 1, 2, and 3.

Several days before taking first blood count patient felt

indisposed with some soreness of throat. This became more severe and after a few days marked swelling of the lymph nodes over entire body was noted, and especially marked in cervical and submental regions. Low-grade fever present but not sufficient to keep patient confined to bed. Blood count made about December 20, 1923, revealed 27,000 leucocytes, but no differential count was made. Two days later complete count was made, revealing no decrease in red cells but marked changes in the whites, which numbered 19,000 cells, 20½ per cent polynuclear cells with 78½ per cent mononuclear cells, 70 per cent of which consisted of the large mononuclear variety consisting of many lymphoblasts and Reider forms. Counts were repeated at three- and four-day intervals, revealing on December 24, 14,300 cells with 22 per cent polynuclears and 78 per cent mononuclear cells; December 27, 16,000 cells with 14 per cent polynuclears and 86 per cent mononuclears. Another count made on December 31 gave 42 per cent polynuclear cells with 58 per cent mononuclears. Last count made some days later revealed almost normal relations of the various elements.

Fever continued for about two weeks with marked glandular swelling. This gradually subsided with a decrease in the cell count. Throat was extremely sore and revealed a firm whitish membrane over each tonsillar fossa, which was hard and dry to touch. It was difficult to remove any portion of membrane and smears failed to reveal spirochetes. Cultures revealed a pure culture of a streptococcus nonhemolytic in character, and showing a dirty brownish discoloration of blood agar.

Symptoms gradually subsided and patient returned slowly to normal. Entire time occupied by disease, about four weeks. Blood cultures were not made.

#### Blood Counts—All Kinds

Date	Reds	Whites	Polym	Sm. L.	Monos. L.	Trans	Total Mononuclear
Dec. 20....		27,000					
Dec. 22....	4,960,000	19,000	20½	3	70½	5	79½
Dec. 24....		14,240	22	5	70	3	78
Dec. 27....		15,840	14	18	64	4	86
Dec. 31....		8,600	41½	7½	46	5	58½
Jan. 6.....		7,400	61	15	22	2	39

CASE No. 5. Mrs. R. W., age 24. Illness began on a Friday of September, 1924, with an apparent swelling on her face and lips. Patient says she thought it was lymph channels (having been a student of medicine). The same evening the swelling was quite marked. No evidence of enlargement of the glands. Next morning the swelling disappeared, but large areas of urticaria developed which cleared on taking a soda bath.

The second day the cervical glands began to enlarge and became about the size of walnuts. They were but slightly tender. The axillary and inguinal glands were also enlarged.

Patient's temperature gradually rose to 103 in the afternoon, coming up in a typical stepladder manner, lasted five days and subsided by lysis.

The third day the most distressing part of her complaint began, consisting of an extremely sore throat. A culture was made but found to contain no diphtheriae organisms, and a stained smear from slant revealed only cocci, type undetermined. Throat symptoms lasted for about two weeks.

The course of the disease was four weeks, and after a period of three months the patient feels perfectly well, although glands are still palpable.

Stools as described by patient were red with blood at times, but not confirmed by laboratory examinations.

Oxidase reaction proves cells to be of mononuclear and lymphoid origin.

#### COMMENT

Few blood diseases present such a striking picture. The early glandular enlargement, symptoms of discomfort in the mouth, and the blood picture presents the chief findings in cases of that dread and fatal disease, acute lymphatic leukemia as well. In fact, at times the course of the dis-



Date	Hbg.	Red Cells	White	Polys.	S. L.	L. L.	Eos.	Bas.	Tr.	Total Mono. Count
9/21/24	95%	5,470,000	18,100	16	75	4			5	84
9/22/24			18,200	18	66	7			9	82
9/24/24			13,500	18	76	4			2	82
9/27/24			7,550	33	56	6.5			4½	67
9/29/24			6,500	31	58	8	1		2	69
10/ 1/24			5,000	40.5	43.5	5	1	.5	4½	58
10/ 3/24			5,700	41	50	4	1	1	3	56
10/ 7/24		4,930,000	6,650	49	34.7	4	2	.3	8	49
10/12/24			4,100	47	44				9	53
10/19/24			3,700	28	61	6	2	1	2	69
10/28/24			6,250	36	50	6 Pol. M.		37½	5½	62
10/21/24			11,000	63	34					34

ease alone will give a final diagnosis and prove the benignancy of the condition.

Case No. 3 presented the most difficulties. This case was probably complicated by other conditions. Here we found the highest count on record in this disease, 48,000 per cu. mm. Pathologists and other consultants were of the opinion that acute lymphatic leukemia was the correct diagnosis. In spite of the predicted fatal termination the patient recovered and at the present time is normal in every way.

Many patients with this trouble remain undiagnosed on account of the moderate nature of the symptoms and the lack of careful study given to the laboratory findings. A simple leucocyte count will reveal an increase in cells, but the variety remains unknown, due to failure of a differential study. The period of leucocyte increase is not of long duration and the patient soon recovers, the symptoms being ascribed to any one of a number of common infections of the nose and throat.

#### DISCUSSION

NEWTON EVANS, M.D. (Loma Linda, California)—Doctor Butka has rendered a distinct service in calling attention to this interesting condition and, perhaps most important, in warning of the danger of confusing the condition with lymphatic leukemia. It is valuable to know that there is a condition which is so very similar to leukemia for which we must be on the lookout. As I see it, the most helpful, practical criterion in the differential diagnosis is the fact that, as a rule, the total leucocyte count in the infectious mononucleosis is not over 35,000. One of Doctor Butka's cases had a maximum leucocyte count of 48,000. It is an important question whether, as he suggests, this may have been due to some associated condition and was not an essential characteristic of the disease itself. If counts running up to 50,000 may be expected in infectious mononucleosis this fact will in itself make discrimination from lymphatic leukemia the more difficult.

This symptom complex, which is obviously an infectious process, presents another of that group of infectious diseases which are still unsolved problems as to etiology. Its comparative rarity makes it the more difficult for bacteriological study. It is to be hoped that some worker will be so fortunate as to have the opportunity and the ability to solve this problem. Its apparent slight tendency to produce any mortality would make it seem inconsequential, but the fact that it produces a definite period of morbidity with a prolonged convalescence, constitutes it as a disease of decided importance.

A. M. MOODY, M.D. (Saint Francis Hospital, San Francisco)—Doctor Butka's article is of considerable interest, as anyone directing laboratory work must from time to time come in contact with blood counts such as are here recorded. It has been my good fortune to observe a small number of these cases and to be able to differentiate them from lymphatic leukemia, which is important from the standpoint of prognosis.

The important laboratory point in differentiation is the presence in blood smears of many irregularly staining, degenerating and smudged types of mononuclear cells, together with a very high percentage of lymphocytes. Such blood pictures do not occur frequently, which, perhaps, can be illustrated by the fact that in over 4500 differential blood counts made in the Saint Francis Hospital laboratory since June 1, there is but one occurrence of this condition.

This patient was from outside the hospital and one count only was taken.

The question of whether the disease should be called "infectious mononucleosis" or "acute glandular fever" seems to me to be unimportant. However, the term "acute glandular fever" is in keeping with the anatomical lesions present, whereas the mononucleosis undoubtedly is the result of, and therefore incidental to, the acute involvement of the lymph glands in this condition.

GERTRUDE MOORE, M.D. (Western Laboratories, Oakland, California)—In spite of its infrequency, infectious mononucleosis must always be borne in mind whenever one is tempted to make a diagnosis of acute lymphatic leukemia at the beginning of an illness which has as its outstanding symptoms fever, enlarged lymph glands, and a high absolute and relative mononuclear count. In order to avoid the error of a hopeless prognosis in these cases, we must watch developments and make repeated blood examinations until thoroughly typical blood changes have been demonstrated, for the blood changes in acute infectious mononucleosis are so similar to those of acute lymphatic leukemia as to deceive the most experienced hematologist at times. However, I believe the following points are helpful in the differentiation of these two conditions: First, the abnormal cells which are of the germinal center type of lymphoblasts have a wide variation in size, ranging from a cell distinctly smaller than the normal lymphocyte to one three or four times the size of a red blood cell; second, their protoplasm is homogeneous and stains deeply in acute infectious mononucleosis, while in acute lymphatic leukemia both cytoplasm and nucleus show poor staining reaction; and, third, degenerated and fragile forms are frequent in leukemia but very infrequent in acute infectious mononucleosis. The final diagnosis can only be made when, in true leukemia, the blood count climbs to a point above 50,000, or, in acute infectious mononucleosis, drops gradually to normal with an accompanying subsidence of all symptoms.

DOCTOR BUTKA (closing)—The comparative rarity of this disease and the absence of an appreciable mortality contribute to the present day lack of knowledge regarding its true etiology. It is definitely infectious, but the nature of the offending organism is not known. Further investigation along this line will be made as opportunity arises.

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During the recent session of Congress 17,800 bills were introduced—13,251 in the House, 4549 in the Senate—which breaks the record of the session two years ago, when 13,294 separate bills were proposed. Running debate on the floors of the two houses and speeches printed but not delivered used 13,000 pages of the "Congressional Record." Two years ago, at a comparable session, the Record ran a little under 12,000 pages.—Nation's Business.

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The truth is that the thought of America is fashioned in great part by the republic's editors. Editors give counsel which makes for the republic's betterment; editors, in expressing their own views, tend to mold the views of their readers. Often they say coherently and forcefully what others of us have been thinking incoherently, and so give form to our thoughts and enable us the better to weigh them.—Hon. Thomas J. Lennon, Justice Supreme Court of California.

## THE LATE NODULAR SYPHILIDE

By DOUGLASS W. MONTGOMERY, M. D.

DISCUSSION by Harry E. Alderson, San Francisco; Anstruther Davidson, Los Angeles; Thomas J. Clark, Oakland.

*Stigma monumenti revocans in memoriam iniquitatem*, a memorial stigma bringing iniquity to remembrance.

The efficiency of the Wassermann reaction in detecting the presence of syphilis, and the success of arsphenamine in clearing up luetic lesions of the skin and mucous membranes is so marked that the importance of the clinical diagnosis of these interesting manifestations would seem to be diminished. Numerically this is so, as between 80 and 90 per cent of those afflicted with late lesions of the skin give a positive reaction. *The very success of the Wassermann reaction, however, makes it all the more desirable to be able to make the diagnosis clinically when it fails.* In practice we find it more and more frequent for both the physician and the patient to rely unqualifiedly on the laboratory diagnosis, which is a great evil.

Not long ago we had a patient with late active lues in the nose, in the roof of the mouth, and in a toe, and yet her serum reaction was negative. As practicing physicians we all are aware of the moral value of a positive, unshakable diagnosis as a support in carrying out an efficient, continuous line of treatment, and this support may be obtained equally well from the clinical manifestations as from the laboratory findings.

Then there are cases in which the patient may suffer from two different lesions, and it becomes eminently desirable to be able to say that one of these will heal expeditiously under the treatment, while the other will not do so.

There is still another weighty reason for rehearsing the clinical features of the late syphilides at every convenient opportunity. The success of arsphenamine in clearing up the lesions of the skin and mucous membranes, or in preventing their appearance, is so great that the occasions for seeing them have become quite infrequent. Even in large clinics teachers complain of the paucity of material for demonstration. It is therefore desirable to make the best use of the few chances available, and one can only do so by being prepared for the event.

The late nodular syphilide used to be called the tubercular syphilide because it was usually larger than the early papule and more sluggish in its course, but since so many nodular cutaneous affections have been recognized as appertaining to tuberculosis, the epithet "tubercular" has been dropped from the spirochetal affections entirely, as leading to confusion.

The late syphilitic papule, or nodule, both anatomically and etiologically, is the same as the early papule of the widespread papular or papulopustular rash. I well remember how surprised I was in sectioning a papule from a patient with a rare early miliary syphilide in the old Polyclinic to find that anatomically it was a minute gumma, even to the presence of giant cells, and a gumma is nothing more than a large, deeply situated, solitary nodule.

The greatest incidence of the late nodular syphilide is about the third year of the disease, but it may

occur even in the first year, and it has been known to appear as late as fifty-five years after the primary lesion (Fournier).

The nodule of syphilis is a little tumor, and this should always be borne in mind in considering a diagnosis. It is generally about the size of a small pea, and it has the substantiality of a tumor, both to the eye and to the finger. It looks to be, and really is, well set in the true skin, and may extend below it into the subcutaneous tissue. Its surface may be intact, rounded and smooth, and its characteristic color is deep red or that of raw ham, but it may be bright red. If it occurs as one sole lump or nodule, or a few such widely scattered, I do not know how to make the diagnosis clinically, but it seldom so occurs, except as a very large node, when it tends to central liquefaction and on opening discharges a glairy pus, and is called a gumma. Even here the resemblance between a syphilitic gumma and a tubercular gumma may be too close to differentiate. The course of the tubercular lesion is usually slower than that of syphilis, and the infiltration is usually softer. We have such a case under observation at present. The late nodular syphilide usually occurs as one of a group, and then its characteristics may be so distinctive that any well-trained physician may make the diagnosis. Like everything organic the luetic nodule grows to a size limited by its nature and then recedes.

The nodules of any group are all of different ages and therefore of different sizes, and their general appearance also differs with their age. An individual nodule may pass through its whole life cycle in or under a superficially intact skin, or possibly only give rise to some desquamation as an evidence of its inflammatory nature, and may disappear, leaving no surface evidence of its previous existence, or it may cause a scar. The presence of these scars in a nodular patch is of great diagnostic value. Individual nodules will almost certainly liquefy in the center, and in opening on the surface give rise to small steep-edged ulcers with a dirty grey base.

Instead of appearing as individual papules the late nodular syphilide may develop as a solid, continuous infiltration with a smooth, even surface and a definite border, just as tuberculosis may develop as an infiltration instead of separate tubercles. This type is rare, however.

## THE ARRANGEMENT OF THE PAPULES

Notation of the arrangement of the papules is often most important, as on it may depend the diagnosis.

In contrast to the early papular eruption, which is bilateral as becomes a disease scattered universally by the blood current, the late nodular eruption often shows decided bilateral asymmetry.

We have before spoken of grouping as another peculiarity of diagnostic value, but the papules in the bunch may be numerous and well set apart, and may exhibit no arrangement whatever, constituting what may be called a "buckshot group." Many of the papules may break down into small circular steep-edged ulcers, some of which may be covered either with a yellow or with a black tightly adherent crust, while others will have healed, leaving white or





Circular ulcer of late syphilis. A band of epithelialization may be seen extending from about 5 o'clock on the circle toward the central nub, which will presently transform the circular ulcer into a kidney-shaped one.

reddish brown scars. The variegated appearance of the field may be imagined.

A nodular syphilide may begin as a single nodule, and then others may arise immediately around it, so spreading out continuously from the original center. The spread, however, does not usually take place in an even circle; only a segment remains active, forming an advancing wall, invading the normal skin. Ulceration follows the wall, so that a crescentic lesion is formed with an advancing bow-shaped indurated wall, within which there is a crescent-shaped ulcer, in the hollow of which there is scar tissue. This is the typical syphilitic horseshoe-shaped ulcer with the indurated border of raw ham color. This is the lesion so often mistaken for either lupus or epithelioma, but which is so much more rapid in its course than either of them.

In the development of such a patch quite a variety of grotesque figures may be formed. For instance, Gougerot recently showed a photograph in which two bows joined, forming the letter "S," as if the disease were trying to write its own signature, and recently I saw a crescentic ulcer in which the two horns of the crescent had met, forming a circular ulcer with a nub of sound skin in the center. Subsequently the healing began at one point on the edge and extended toward the central nub, as may be seen in the photograph. This circular ulcer will presently, therefore, again become a crescent-shaped one.

#### THE SITUATION OF THE LATE NODULAR SYPHILIDE

These syphilides have their favorite situations, and in their order of frequency they occur on the face,

especially on the wings of the nose, about the mouth, and on the forehead. On the forehead they may occur along the hair line, causing the corona veneris of the tertiary period. Next in frequency of location comes the palmar and plantar surfaces, the thighs, nape of the neck, posterior surface of the forearms, and the scapular and lumbar regions of the back. They may occur on any part of the cutaneous surface, but it is apparent from the above that the trained observer will pay particular attention to any destructive lesion about the nares, mouth or forehead, to see if by chance any additional signs of syphilis may be discovered.

#### SUPERINFECTION AND CRUSTING

The tissue of a late syphilitic nodule is diseased and of low resistance, and it is situated near the surface, and therefore is readily attacked by pyogenic bacteria. Under these conditions desquamation, ulceration and crusting are natural consequences.

#### THE ULCER RESULTING FROM THE SOLITARY NODULE

The solitary nodule may break down into an ulcer with a definite indurated border, on the surface of which the pus tends to dry, forming a crust. The spirochete is strongly inclined to attack the blood vessels, and I suppose it is because of this that the pus is so frequently mixed with blood. The admixture of blood makes the crust dark brown or black, and very tough. It is also very adherent and fits within the border of the ulcer like a watch crystal in its setting. As the ulcer extends the crust becomes larger, and at the same time rises above its base, and so takes on a roughly pyramidal shape, resembling an oyster shell. The indurated border and the black tightly adherent, accurately fitting, thick, rough pyramidal crust form a striking and characteristic picture.

#### THE DESQUAMATION AND CRUSTING OF THE GROUPED NODULAR SYPHILIDE

The nodules, as before remarked, may be grouped, but irregularly scattered. They may, however, be closely agglomerated so as to form a continuous desquamating surface, in which case the diagnosis may be impossible to make. I remember well an incident in the old Toland Clinic at North Beach that made a great impression upon me. A woman had what appeared to be an indurated eczema on the side of the nose near the eye, for which I prescribed ammoniated mercury ointment. At the next visit, a week later, the lesion had so cleared up as to show plainly its nodular character, and then I discovered several other stigmata of lues that had previously escaped my notice. It was a good illustration of the clinic axiom that one finds what one looks for.

The crusting may be impetiginous, and so thick as to completely hide the subjacent definite luetic symptoms, and so give rise to an erroneous diagnosis of impetiginous eczema, or of impetigo. In any doubtful case nodules and scars should be sought for.

One must also remember that it is impossible to tell beforehand how much real loss of substance has taken place under a crusted syphilide, and it is often

advisable to warn a patient of this, lest he blame the treatment for the deformity.

#### CONDYLOMA LATUM

When luetic papules occur on approximated surfaces of the skin or mucous tracts where they are kept warm and moist as in the vagina, between the labia, and in fat people in the groins and in the axillae they assume a different aspect.

They are steep-edged elevations, flattened on top, and are called condylomata lata, or flat venereal warts, in contradistinction to the condylomata acuminata, or pointed warts, with which they may be associated but which have a different etiology.

Condylomata lata usually occur in early constitutional syphilis, and used to be frequently met with. Since the introduction of arsphenamine they are rarely seen, and with their disappearance has gone the greatest danger of infection.

It is important to notice that here again we have a solid, broad, substantial lesion such as is so frequently found in syphilis.

The acuminate wart may arise from any irritating discharge, such as gonorrhea, or that from pyogenic bacteria, and are therefore frequently adventitious to the broad luetic warts. Because the acuminate warts so frequently owe their origin to the irritation of gonorrheal discharges, or to streptococcal infection on a luetic base, many associate them obligatorily with venereal disease. It is very especially worth noting, however, that they may occur on the privates during pregnancy without any venereal disease whatever. Years ago I saw with Dudley Tait a patient who, being pregnant, had nonvenereal acuminate warts of the genitalia. An injudicious practitioner had previously seen the patient, and had designated them as being venereal, with what might have been the most deplorable consequences.

#### SCARS FROM THE LATE PAPULAR SYPHILIDE

Scars following this form of syphilide are often characteristic. When recent they are frequently maculated reddish brown, because of the blood pigment they contain, a result of blood extravasation due to spirochetal injury to the blood vessels. For the same reason they may be bordered in brown. This brown pigmentation is most frequent and most persistent in lesions of the legs, especially of the lower third. After a time the scars become smooth, pliable, and white. Of course, scars are almost always unilateral, and solitary or grouped. A group of ulcers may become confluent and the resultant scar may be quite large, and have a polycyclic border, following in this respect the outer contours of the component ulcers.

A unilateral group of small scars on the forehead, or to one side of the vertebral column, or to one side of the sternum may be due, not to syphilis, but to herpes zoster.

In regard to scars of the leg, those of the lower third may be ascribed to *ulcus cruris*, but those of the upper third, and especially about the knee, when not due to traumatism, are strongly suggestive of lues.

Enough has been said to indicate how many different clinical pictures may be produced by the differences in behavior of the purely spirochetal lesions themselves, and then add to these the differences pro-

duced by the superinfections, and those due to the constitution of the patient affected. It would be impossible to enumerate them. Often in descriptive work one has to take up the parts of a picture, frequently to utterly fail to convey the picture as a whole. The only way to keep the parts together in clinical pictures exhibiting such a variety is to constantly recur to the well-known pathology of syphilis and to the symptoms we know to be produced by the spirochete in the tissues, and these are the solidity of the infiltration, the prominence of the lesions, the tendency to grouping, the often concentric advance and fairly rapid progress, the painlessness, the ulceration, and the scarring.

#### DISCUSSION

HARRY E. ALDERSON, M.D. (490 Post Street, San Francisco)—Doctor Montgomery in his usual interesting and instructive manner has called attention to the clinical diagnostic features of nodular syphilides. He mentions the very great importance of not neglecting the clinical side of dermatology. Our present laboratory aids are indispensable, but the same may be said of our clinical observations. To depend blindly upon the laboratory or clinical findings alone is a serious mistake.

Typical nodules (or gummata) of this type are, to the experienced physician, diagnostic of lues. We frequently begin treatment of these patients while awaiting the result of the Wassermann and never have failed to see our diagnosis confirmed either serologically or therapeutically. We are indebted to Doctor Montgomery for this timely appeal and interesting description of a type of luetic skin lesion that all should be familiar with.

ANSTRUTHER DAVIDSON, M.D. (419 South Alvarado Street, Los Angeles)—Doctor Montgomery has emphasized the necessity for accurate clinical diagnosis of nodular lesions in those ulcerations that are Wassermann negative or weakly positive. In such cases, to determine whether lesions around the nostrils are syphilitic or cancerous, is difficult and the diagnosis is wholly dependent on those features the author so clearly points out. There is little room for discussion on a paper on the contents of which we are all in agreement. I would like to add that while the scarring produced by a nodular syphilide is very characteristic, it is almost impossible at times to differentiate it from those produced by blastomycosis or the superficial form of sporotrichosis.

THOMAS J. CLARK, M.D. (Oakland Bank Building, Oakland)—Doctor Montgomery in his interesting review of the salient points of nodular lues stresses some capital reasons for close observation of skin lesions so that the physician may strengthen his diagnostic acumen.

Doctor Montgomery's training was in the school where observation, comparison, careful analysis of the course of events, and the search microscopically for the minute structure of lesions was the evidence to be secured to warrant his diagnosis. This habit of thought in gathering clinical points does give results. We feel assurance to have a master say, this is lues, or epithelioma or lupus.

Careful habits of search for clinical evidence is the school producing such men as William Osler.

It is interesting to see the persistence of syphilis and we do well to keep our judgment balanced about this feature. It is easy to ascribe all obscure pathology to syphilis. If we remember, the course of the disease is so well defined in the majority of cases it gave rise to the clinical arrangement of primary, secondary and tertiary periods, these different periods showing a rather acute local process of inflammation, followed by a widely distributed or generalized inflammatory reaction which gradually subsided to a local disturbance in the tissues. Montgomery calls our attention to these features of the tertiary nodulation—color, asymmetry of distribution, lack of pain, scarring, and a more rapid course than that of lupus or epithelioma.

The percentage of successful diagnosis of syphilis is highest during the secondary or generalized stage. This is followed by more or less active treatment. With the



tertiary lesions the percentage of positive blood findings drops sharply, so it is very important to recognize the disease by its clinical characteristics.

Doctor Montgomery's broadminded attitude of using these cases of tertiary syphilis to educate the younger medical men is commendable.

## QUANTITATIVE ESTIMATION OF ALBUMIN IN URINE

By A. M. MOODY AND LOUISE STOCKING

(From the Laboratory of St. Francis Hospital,  
San Francisco)

THIS paper relates the details of an accurate and rapid method for the quantitative estimation of albumin in urine. The discussion is limited, first, to a brief review of the inaccuracy and delays encountered in using the ordinary textbook procedures and, second, to the technical aspect of the test, without any consideration of the pathological significance of albuminuria.

In February, 1925, a patient in whom we were especially interested developed an albuminuria of such a high degree that it was impossible to obtain a reading on the Esbach tube without diluting the original specimen. This was done with water, although most textbooks simply state "to dilute," but do not specify the diluent. Our readings seemed somewhat large, so we set up a series of dilutions and found that as the dilution increased we obtained greater estimations of albumin. The results when compared with gravimetric determination on the same specimens proved the inaccuracy of diluting urine with water. Those interested in laboratory analyses are aware of the fact that the Esbach determination of albumin in urine gives only an approximate estimation, requires twenty-four hours' time, and is influenced by many factors, yet it is probably the most widely used method.

Since we now know that diluting urine with water increased the inaccuracy of albumin determinations by the Esbach test, and since we did not think that the gravimetric or other known accurate quantitative methods were practical as routine procedures, we set out to find something which could be relied on to dilute urine without disproportionately altering the albumin content.

Many fluids were tried, including the following: Albumin free urine, Tsuchya's reagent, 2 per cent acetic acid, various strengths of alcohol, sodium chloride solutions (2 per cent to .85 per cent), and others. In brief, all the above solutions as diluting fluids were found to yield inaccurate results. Tsuchya's reagent or alcohol used as diluting fluids decreased disproportionately the albumin estimation. Beginning with 2 per cent sodium chloride and decreasing to a concentration of .85 per cent, inaccurate results were obtained similar to those when water was used as diluent. We noted, however, that 2 per cent sodium chloride yielded results which were more promising.

At this point in our work we discovered that Doctor Wykoff of Stanford University Hospital was working independently on the same problem, and that he began at 2 per cent sodium chloride and, working with increasing concentrations, found that 2.5 per cent sodium chloride was the desired strength to be used. He was also working with a standard

control of egg albumin, using a modified Purdy technique for the test.

With these facts we now felt that our difficulties were about over, but believed that a standard made from human blood serum would perhaps be more nearly ideal, since urinary albumin so closely resembles the coagulable proteins in the blood serum. Then, too, Folin, in his laboratory manual, gives the details of a test, using a standard made with hemoglobin free sheep's blood serum, so you see the idea is not new. Sheep's blood serum is not as readily obtained in our laboratory as is human serum, so it seemed quite logical to use the latter as a standard.

It was found that 5 mls. of pooled human serums diluted to 100 mls. with 2.5 per cent sodium chloride solution yielded by gravimetric determination an average albumin content of 6 grams per liter. With this standard solution we then proceeded to shorten the time element from twenty-four hours to fifteen minutes by adopting a modified Purdy test instead of the Esbach.

The procedure as now used is as follows: Place in a 15 mls. capacity graduated centrifuge tube 10 mls. of urine to be tested, and in another similar tube 10 mls. of standard serum solution; then add to each tube 5 mls. of Tsuchya's reagent (phosphotungstic acid 15 gms. hydrochloric acid 50 mls., and make up to 1000 mls. with alcohol 95 per cent); mix thoroughly by inverting back and forth, and let stand for ten minutes; then place the tubes in the centrifuge and centrifugalize for three to five minutes. Record the amount of precipitate in each tube and calculate the result.\*

The standard tube reading equals 6 gms. albumin per liter.

We have made over one thousand determinations, using the above technique as routine, with frequent checks by the gravimetric method. The average difference was 3 per cent higher by the centrifuge method. In many determinations identical results were obtained, figuring to one decimal. No attempt has been made to estimate closer with one decigram. Slight errors may readily occur in reading amounts between the graduations on the centrifuge tube, and also in the gravimetric method, if the sediment is not properly dried to a constant weight.

When using the above method it must be remembered that the standard is set up at the same time as the unknown, and that all solutions are kept under the same temperature conditions at all times until the final reading is made. In this way only is one justified in comparing results. If it is necessary to dilute the unknown, do so with 2.5 per cent sodium chloride solution, a stock bottle of which is kept under the same temperature conditions as the standard and unknown. In this laboratory it has been practical to keep our standard solutions at room temperature.

The standard solution is made fresh each week, oftener only when the stock has been used. A small amount of preservative (chloroform 1 to 1.5 mls. per 100 mls. of serum solution) can be added to prevent bacterial growth or other determination. In

\* The supernatant fluid should be water clear after centrifuging. If there is the slightest turbidity then the concentration of albumin is too great for complete precipitation, and the original specimen must be diluted. This necessitates repeating the entire procedure.

our laboratory this has not been necessary because our standard is used rapidly and we make only 100 mls. at a time.

Since our technique was adopted as a routine procedure there has appeared an article entitled, "A Simple and Rapid Quantitative Test for Albumin in Urine," by William G. Exton (*Journal of Laboratory and Clinical Medicine*, vol. X, No. 9, June, 1925, pp. 722-35). This method, according to the report, has "a possible accuracy to within an experimental error of 2 mg., or one part albumin in 50,000 parts of water." The test is based on the principle used in Folin's method of comparing varying degrees of turbidity with known standard solutions of coagulated blood serum proteins accurately prepared in a series of tubes, ranging from 0 to 100 mg. albumin per 100 mls. Exton's clinical albuminometer for comparing the unknown with the standard for rapid reading is described, together with details for preparing the standard. We did not feel that this test was practical for our purposes so cannot report any experiences with it.

In conclusion, we feel that the test here reported and which we have now used for the past year, is one that is technically simple, practical, time-saving, and accurate to a degree well within the range of the requirements for routine clinical laboratory procedures.

**Safeguards in Cataract Expression**—This paper by John Green, St. Louis (*Journ. A. M. A.*), deals solely with certain points in operative technic. The general preoperative preparation of the patient will not be discussed. It is summarized as follows: 1. Iridectomy under a conjunctival flap heals promptly, without reaction and with little or no danger of infection. 2. In case of immature cataract, opportunity is offered for artificial maturation. 3. Misbehavior by the patient will not imperil the success of the iridectomy and will warn the operator to use extra precautions (akinesia, lid hooks, etc.) at the time of the expression. 4. A realization of the painlessness of the first operation and postoperative period greatly heartens the patient and abolishes his dread of the second operation. 5. The trapezoidal flap possesses all the advantages of the small triangular flap and, in addition, (a) it is thicker and more sturdy; (b) it covers the entire section, and (c) it is held in perfect position under all circumstances by the central Verhoeff stitch and the lateral conjunctival sutures. 6. The steadying of the flap by downward traction on the threads of the Verhoeff stitch enables the operator to complete the section without fear of cutting off the flap. 7. With the Verhoeff suture loosely tied, the flap is drawn into good position and irrigation of the chamber may be carried out with great security. Should vitreous present or prolapse, the immediate tightening of the suture will cause the vitreous to recede or prevent further loss. 8. The toilet of the wound can be carried out leisurely and effectively even after vitreous loss. 9. There is little tendency for the iris to prolapse (no "visible" prolapses in seventy-six cases). 10. Iritis, if it occurs at all, is mild and easily controllable by atropine, heat, and salicylates. 11. Anterior synechiae are very rare. 12. There are a large number of "keyhole" pupils. 13. The secondary membrane is usually very thin and can be sufficiently slit by a single vertical incision (Wheeler). 14. Thick membranes are dealt with by Ziegler's inverted V-shaped dissection.

It is no longer sufficient to name the disease from which the patient suffers and prescribe an appropriate remedy. The physician of today must attempt to analyze the disturbances accurately. He must be prepared to measure the alterations manifesting themselves from day to day, and his treatment must be established on a quantitative basis.—Rufus Cole, *Science*, August 6, 1926.

## Special Article

### EDUCATION OF THE PUBLIC IN ELEMENTARY MEDICAL SCIENCE

By GEORGE E. COLEMAN \*

President American Association for Medical Progress,  
Santa Barbara County Branch

**THE EDITOR**—The American Association for Medical Progress is a favorably known democratic organization, made up largely of intelligent nonmedical citizens, and conducted with the praiseworthy purpose of making suitable facts about the promoting of health, the prevention and treatment of disease, and in general the methods, purposes and practices of educated physicians, better and more widely understood; to assist in combatting the effect of ignorance and the activity of quacks, cultists and sciosophists of all classes in their efforts to capitalize sickness to their own advantage.

The Santa Barbara County branch of the Association, of which Mr. Coleman is president, is a particularly and effectively active one, due doubtless largely to capable activities of its president with the co-operation and support of honorary president, Henry S. Pritchett; honorary vice-presidents, Judge R. B. Canfield, George S. Edwards, Seth A. Keeney, George Owen Knapp, and C. A. Storke; a lay advisory board of F. F. Peabody (chairman), Frederick C. Clements, George W. Clyde, Col. Charles H. Graves, R. W. Hersey, Bernard Hoffman, Mrs. Michel Levy, Mrs. Frances B. Linn, Miss Annie McCaughey, Paul E. Stewart; and a medical advisory board made up of ten physicians of the county.

Mr. Coleman's article, illustrated by reproductions—some of them advertisements in the newspapers of Santa Barbara—is published that physicians may more fully realize and appreciate the strong ally they have in promoting and protecting the health of our citizens.

Even our good friend Mr. Coleman, whom physicians honor and respect, misses the point in medical ethics that encourages individual physicians who are in the practice of medicine to issue their newspaper and similar health information in the name of their County Medical Society, so as to avoid a misunderstanding of motives both by the public and other physicians, which experience shows to be otherwise the unavoidable and invariable result. The apathy of physicians also is hardly as bad as indicated because the majority of periodicals and hundreds of newspapers are publishing medical information, while the A. M. A. publishes a popular monthly magazine devoted exclusively to authoritative health information, and a group of ethical doctors of California also publish monthly a popular health magazine.

However, none of these facts detracts from the value of Mr. Coleman's message, nor do they make the added work of the American Association for Medical Progress less necessary.

**T**HIS article is prompted by a desire to further inform physicians of the effort the organization I represent is making to give reliable medical information to the public. I shall also endeavor to make clear the imperative necessity for a more active participation by the profession as a whole in the work along these lines that is being done by laymen.

The Santa Barbara County Branch of the American Association for Medical Progress has been in active operation considerably less than a year. It has received favorable comment in *CALIFORNIA AND WESTERN MEDICINE* and

\*George E. Coleman (119 Hot Springs Road, Santa Barbara, California). B. S. University of California, 1891. Graduate study: At Pasteur Institute, Paris; Metchnikoff's laboratory; Hospital Santa Maria Nuova, Florence, Italy; private laboratory at home in Santa Barbara. Scientific organizations: Society of American Bacteriologists, Santa Barbara Natural History Society, National Geographic, president and organizer of local branch American Association for Medical Progress. Present appointments: Research Associate Hooper Foundation for Medical Research, University of California Medical School, San Francisco. Publications: Articles in *Ann. de l'Inst. Pasteur*, *Jour. of Infectious Diseases*, *Better Health* and newspapers; about fifty columns of latter last year; instructive articles for laymen in elementary medical science.



the Journal of the American Medical Association. While giving full credit to the very effective work of other organizations, I feel that physicians should know of the sustained effort along these lines we are making in Santa Barbara County. Our residence in southern California, the happy hunting ground of quackery and cultism, makes the menace of epidemics seem very real to us.

Concisely stated the aims of our Association are:

1. To encourage and aid all research and humane experimentation for the advancement of medical science.
2. To inform the public of the truth concerning the value of scientific medicine to humanity and to animals.
3. To resist the efforts of the ignorant or fanatical persons or societies constantly urging legislation dangerous to the health and well-being of the American people.

Our organization with a present membership of 256 has the hearty endorsement of the County Medical and Dental societies as well as the City and County Health authorities. Our honorary officers and our lay and medical advisory boards are made up of leaders in medical and civic activities in this community. We have maintained close contact with various agencies devoted to public education in health matters, including our parent national organization, of which the writer is a director. During the past nine months we have published about fifty-five columns of medical information in local newspapers. About half of this appeared as answers to questions in our Medical Progress Column. The other half was written by me principally on the cause and prevention of disease. I have also sent out reprints of addresses which I have delivered before the Rotary, Exchange, University Clubs, etc., as well as at other meetings. As a laymen's organization we have not felt strictly bound by the ethics of physicians, so in addition to reading matter we made formerly several announcements in the advertising sections of the newspapers. This was later discontinued as its value was questionable from an educational as well as from a financial standpoint. Some of these announcements are reproduced in this article.

## The AMERICAN ASSOCIATION for MEDICAL PROGRESS

*favors*

## Humane Animal Experimentation

By this method only can a cure for Tuberculosis, Cancer or Animal Diseases be found.

THE ANTI-VIVISECTIONISTS WOULD PERPETUATE FOREVER THESE DISEASES OF MAN AND DUMB ANIMALS.

Your membership will help promote public health and enlightenment.

I have made a special appeal to those uninformed and prejudiced members of humane societies, who happen to be genuine lovers of animals, that they may be brought to realize the necessity for animal experimentation in medical research. The results of the investigation by eminent bacteriologists, as reported by the American Distemper Committee, of this disease in dogs has been given the widest publicity by us. This because of the importance of

## The American Association for Medical Progress

THIS is an organization of laymen whose object is to disseminate as widely as possible authentic information regarding the fundamentals of modern medicine. Information as to the cause, prevention and cure of disease in man and animals depends upon a careful check on research. And experimental research depends largely upon the humane use of animals. This very factor of humane animal experimentation has accomplished the following great blessings for mankind and dumb animals:

It has found the way to prevent anthrax, Texas fever and hydrophobia.

It has rendered vaccination harmless and smallpox entirely preventable.

It has given us anesthetics and eliminated surgical infections.

It has given diabetes, through insulin, a new lease of life.

It makes the prevention and cure of scarlet fever almost a certainty.

It has cut the death-rate of diphtheria over 80%.

It gave us most of our efficient methods of sanitation.

It has led the way to the abolition of yellow fever and malaria.

It has made typhoid no longer a community danger.

It has made possible correct diagnosis and permanent cure of syphilis.

It has made possible the prevention of tetanus (lock-jaw).

Only by means of humane animal experimentation can any hope for the cures of cancer, tuberculosis, infantile paralysis or animal diseases be found. Quackery is a menace—Scientific medicine has no "secret remedies." Continuous education can greatly reduce the failure of others to understand rightly the scientific attitude. We need the help of every intelligent citizen in the community.

Your membership will help promote public health and enlightenment.

the results attained insofar as they may have a hearing on future research in human and animal diseases and for its value in proving the necessity for the humane use of animals in the search for new knowledge. According to an article which recently appeared in the "Christian Science Monitor," it was announced at a meeting of the Anti-Vivisection Society of Los Angeles that "the society is planning to send an anti-vivisection car on a tour of the state as part of a campaign against vivisection and inoculation, following a plan which Doctor Hadwen described as having been successful in England." It is impossible to tell to what extent our efforts as a whole, thus far, have been justified, but the vote of this community on the proposed anti-medical legislation to come up in November will tell the tale.

Without outstripping the bounds of modesty I feel that I may consider myself as a sort of liaison officer between laymen and the medical profession in this community. As a research worker in bacteriology and allied subjects and a constant reader of many medical journals, including the journal of the A. M. A., for the past sixteen years, I also feel that, without offense, I may ask you for a hearing concerning the attitude of some physicians toward the active participation by members of the profession in the education of the public in elementary medical methods. The necessity for this has been stressed repeatedly by prominent physicians and has the endorsement of the A. M. A., the C. M. A., and other official medical organizations. I earnestly call the attention of every physician in this state to the very illuminating article by Wendell C. Phillips, president of the A. M. A. (Jour. A. M. A. 86:17, p. 1259).

For years before the local branch of the American Association for Medical Progress was organized I have been fighting battles for scientific medicine and in a section of the state where it has many enemies. If they are not to increase, the profession as a whole will have to arouse itself from its apathy. Anti-science or sciosophy, as Doctor Jordan calls it, is rampant throughout the country and the discrediting of the medical profession particularly is a common indoor sport where groups of really intelligent people, not necessarily cultists, often discuss your failures.

The "Medical Trust," state medicine, corporation prac-

## The American Association for Medical Progress

This Is An Organization of Laymen

Whose object is to disseminate as widely as possible authentic information regarding the fundamentals of modern medicine. Information as to the cause, prevention and cure of disease in man and animals depends on a careful check on research. And experimental research depends largely on the humane use of animals.

Full use of our best scientific knowledge is possible only with the support and co-operation of the public. Such co-operation depends entirely upon an appreciation of what scientific medicine and research mean.

Ignorance is a menace to medical progress and to the health of the people. By its inability to under-

stand the scientific attitude, it opposes medical knowledge that can be gained only by the experimental method. This can be remedied by continuous education.

A membership in this Association will cost only Two Dollars annually. We need the help of every intelligent citizen in the community.

Read the "Medical Progress" Column in the "News" Every Saturday Night

Your membership will help promote public health and enlightenment

rice and, of course, unfortunate individual experiences are the usual themes. Seemingly plausible "body mechanics," "expert dietitians," and religious healers, are rapidly gaining the confidence of educated but unthinking people. You have only yourselves to thank for this. You have lost the outer ramparts in the battle for a single Board of Medical Examiners in California as well as in other states and now they are about to batter at the very doors of your hospitals.

Better support will have to be given to those fearless ones among you, and there are several in Santa Barbara who are working for the good of all by health talks and by articles in the lay press. There is no more reason why information concerning the physiological processes of the human and animal body should not be authoritatively given to laymen than astronomical or other scientific knowledge. The New York "Evening Post," in a convincing article, has truthfully stated that "the science of medicine as far as laymen are concerned is the most tongue-tied of all the learned professions."

If you could only realize as I do the avidity of the public for reliable medical information you would discard your ultra-conservatism and aloofness, remodel your ethics to meet the exigencies of a menacing situation, and give the public what it wants and above all what it needs. If you do not do this, plausible quackery will increase and the high ideals of public service which have been gained by the profession after long years of striving, will suffer. Already in your ranks standards are being lowered and reputable physicians are found who are willing to use such "secret remedies" as Koch's Cancer Cure, of which I know only one thing—that its formula has not been given to the profession, and that is enough. By taking the public into your confidence, by establishing a closer contact with your patients, by explaining to them the knowledge and ideals upon which your professional standards have been founded, you will enhance your usefulness and extend your activities for human welfare in general and your own in particular.

I have no quarrel with the medical profession. Though lacking a medical degree, as a medical scientist I feel in my heart and in my sympathies as one of you. I therefore urge you to give careful consideration to the present hostile and dangerous attitude of large numbers of our population and to co-operate more widely with the efforts of those physicians and laymen with medical knowledge

who are fighting the battle of scientific medicine. It is your fight, and if it is to be won, the control of the tactical methods for winning it should be kept largely in your own hands and not relegated almost entirely to well-meaning but often uninformed laymen.

**Developing the Nursing Instinct in Girls**—The nursing instinct is as universal among normal girls as is the policeman or soldier instinct among boys, but its intelligent development is of far more recent origin.

From time immemorial our boys have had encouragement and help in promoting and fixing this military instinct, but it remained for the Red Cross to initiate and develop a nation-wide promotion of the far more useful spirit of nursing among girls. This they have done and are doing through a variety of highly commendable methods which are being improved and made more practical and useful.

Nowhere is this instruction being more wisely and systematically promoted than on the Pacific Coast under the leadership of Dorothy Ledyard, R. N. (Assistant National Director Nursing Service, A. R. C.).

A few quotations from teachers in home nursing courses and from pupils form interesting reading which older heads may well ponder:

1. "The students of the Home Nursing Class have a great deal more interest in having good health and are glad to co-operate with us when we suggest they see a doctor about eyes, ears and any other ailments of a minor nature. Before, unless they were sick in bed, we could not get them to see that small ailments should have the attention of a doctor."

2. "Nineteen students have signed up for the Red Cross Course in Home Hygiene and Care of the Sick. So far we have had the Chapter on Bed-Making, Cause and Prevention of Disease, and the Care of Patients with Communicable Disease. It is a very interesting and interested group. The county nurse is planning to convert the room of one of the girls into a sick chamber, with Mary isolated as a scarlet fever patient. The students are looking forward to helping with this clinic in connection with their class work, which takes three hours a week, meeting three times a week. The pupils are required to spend two hours a week doing infirmity duty. Several of the girls are interested in nursing."

3. Two young high school misses express themselves as follows concerning the Red Cross Home Hygiene Course: "I am not yet certain, but I think I shall be a nurse. If I do, hygiene will help me a great deal, for I shall have had the foundation for the work in the hospital. It would be a great help to already know how to make a bed correctly, to give a bath in bed, and the great many other things which we learn to do."

"I intend to go to college, then some time have a home of my own. Home nursing will help me while I'm in college away from mother, to look out for myself. In my home I'll know best how to care for the home and persons in it."

4. "The nurse, this month, directed her efforts mainly to making home calls on parents whose children needed physical defects corrected immediately, hoping to persuade them to have the necessary work done during the Easter vacation. Her efforts were rewarded by eight children having tonsils and adenoids removed, ten having dental work done and two being fitted with glasses."

5. "This week we begin our work bathing babies in the home. Four mothers have given permission for the girls to come to the home and give baby a bath under my personal supervision. Much excitement among the girls."

6. "Four classes of mothers were held during the month. One of the discontinuing members reported having had her small son operated on for diseased tonsils and adenoids. Class discussion of children's defects had made her realize the possible seriousness of the child's condition."

Excellent work. The only unsound note is contained in reports which show zeal carried too far, and about which we refrain from comment.

The rattlesnake seldom strikes without warning; smallpox always.—Naullaqui.



## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### **"WHAT CAN DOCTORS DO TO INCREASE THE NUMBER OF USEFUL BEDSIDE NURSES, AT A PRICE CONSISTENT WITH THE ESSENTIALS IN TRAINING AND EDUCATION FOR BEDSIDE NURSES?"**

**The Editor**—It has been estimated that some two million people consult doctors daily and that another three million should do so. Less than half a million of these have the services of graduate nurses and, if patients in hospitals are excluded, a relatively small number have the services of educated nurses.

Expressed in another way, over 90 per cent of nursing—such as it is—is being rendered by voluntary, untrained or inadequately trained people. With the cost of efficient medical and nursing services increasing, as they inevitably must as the cost of the education and training of these servants of health increases, the burden of the costs of sickness increases, and more and more people are forced to do without them or accept poor substitutes.

Not a pretty picture, but a true one, and one that makes those who have an interest in health and welfare—and who has not?—do a lot of serious thinking—and planning.

The wide variety of opinions about, and suggested remedies for, the problem offered below but emphasizes the fact that *the* remedy, if there be one, has not been discovered. Nevertheless, there are a number of valuable suggestions, and many important phases of the subject are much clarified by one or another of the discussants.

Further suggestions for subjects and names of prospective discussants are invited for *Bedside Medicine for Bedside Doctors*.

**Fred R. Fairchild** \*—The problem of nurse scarcity is very real and very serious. For this condition we physicians are directly responsible, though, I think, not blamable. We have insisted on nurses measuring up to rather high preliminary educational standards and on their having a professional preparation covering three years. We have demanded that their qualifications be such as to relieve us of many of the responsibilities and duties which we formerly gladly assumed.

This attitude on our part came from motives highly commendable. The best, we thought, was not too good when life or health was at stake. This same high standard was carried to all classes of cases where nurses were needed. The result has been inevitable. The law of supply and demand has operated to fix nursing fees beyond the ability of the average patient to meet the bill. This does not mean that the highly trained nurses are less desirable. It simply means that they are unobtainable.

Many discriminating and estimable people ride in Fords and find them indispensable. Cadillacs they know are better, but for them they are unobtainable. Because they cannot have the ideal should they be deprived of that which is necessary and valuable even though not ideal? Apply this to the nursing situation. We must still have highly trained and

competent registered nurses. Let us not demand less as to their preliminary education, technical preparation or fitting personality. But we cannot have this class of service at a price consistent with the ability of many deserving patients to pay.

For these sufferers there must be those nurses who, like Fords, are not ideal, but are still of exceeding value and who can be obtained at a fee consistent with the patient's ability to pay.

We doctors can then "*increase the number of useful bedside nurses, at a price consistent with the essentials in training and education for bedside nurses*" by accepting the services of less highly trained women for those cases not demanding the services of an R. N. These women should have their special training in our Training Schools. Their training would be materially less in time and in exacting details. This training would not qualify them for the degree of R. N. It would create an avenue for the production of a large number of Nurse's Aids, thus covering the demand for help. They would serve at fees materially less than those received by the R. N.'s, thus giving aid to those who must now go without help.

**William H. Gestweit** \*—This subject of nurses and their education, fees, etc., is a perennial problem. The division of the nursing force into practical nurses, near R. N.'s and R. N.'s is impractical and unnecessary. If a case does not need the skill of a highly trained nurse, it needs only an attendant, a companion. The same rule should hold with nurses as it does with doctors. If the patient needs medical attention he should have it, and not a makeshift substitute, varying in character with his financial ability. This solution might be suggested: The training course might be divided into two phases, the fundamental requisites for nursing in general followed by further instruction and practice for those who desire to enter the field of surgical nursing. The young women who do not so desire should be allowed to complete their course without spending their time in the "surgery." These medically inclined young women could go on at this time into those subjects fitting for that type of service. Is not the major part of nonsurgical nursing given over to the care of acute infections and chronic metabolic

\***Fred R. Fairchild** (Woodland Clinic, Woodland, California). M. D. Cooper Medical College. Practice limited to Surgery. Hospital connections: Chief Surgeon Woodland Clinic. Appointments: Chief of Surgical Staff, Letterman General Hospital, 1918. F. A. C. S.

\***W. H. Geistweit, Jr.** (1200 First National Bank Building, San Diego). M. D. Washington University Medical School, 1919; A. B. University of Redlands, 1915. Graduate study: Intern Missouri Baptist Sanitarium, St. Louis, 1919-20; Manhattan Eye, Ear, and Throat Hospital, post-graduate course 1920-21. Present hospital connections: E. N. and T. services Mercy Hospital and San Diego County General Hospital; Scripps Memorial Hospital, La Jolla. Scientific organizations: San Diego County Medical Society; C. M. A.; A. M. A.; Southern California Medical Society; N. A. A.; Secretary San Diego County Medical Society; Secretary-Treasurer San Diego County Library Association; Associate Editor County Medical Bulletin. Present appointments: First Lieutenant M. R. Evacuation Hospital 90. Practice limited to Ear, Nose, and Throat.

disturbances? Is not a large part of such care dietetic and physiotherapeutic in character? Special types of preparation of the articles of food, special articles to be prepared, massage, baths, ventilation and exercise are not necessarily the limited field of a specialist that must be brought in addition to the doctor and the nurse. Yet the so-called "practical" nurse or the housemaid cannot function properly along these lines. If you think there isn't a difference in the preparation of food alone, just try it out in the simple matter of making toast. If all of this, the surgical and the medical training, is required there will be little hope of shortening the course of study, and to my notion the shortening is the crux of the matter. The time needed to produce any article figures largely in the cost. Witness the automobile. The longer the training, the more the nurse must charge for her services—only a just economic principle.

We can still further shorten the time required for training without lowering in the least the standards. Hospitals may have changed in the past few years, but in my day too much housemaid routine was demanded of the students. They become tired out doing that which they should and did learn at home. Time that might be made available for classroom or needed relaxation is used up in washing bedsteads, sweeping and dragging furniture around. If there is no need for additional dietetic instruction, as is probably the case, shorten the course by so much and let the hospitals supply the help to keep the institution in cleanliness and order.

To summarize: The division of the advanced instruction into two branches and the elimination of scrubwomen's labor will shorten the course without affecting the quality of the graduates. The turnover will be increased. The graduates will have spent less of the productive years of their lives in training and can afford to charge less. Then, too, those who stayed out of training because of this unnecessary and avoidable use of time and energy will enroll. If high charges is the bone of contention, increase the turnover and the output. That lowers prices.

**R. G. Brodrick** \*—Nursing in the home has become a serious economical problem for the middle class—the wage and salary earners. The rich are able to pay for whatever care is necessary or desired; the poor are cared for efficiently in our city and county and state institutions.

There remains, then, the person who is too well-to-do to be cared for in a public or charitable institution and cannot afford to go to a private institution, but, who, nevertheless, needs nursing care.

Increased pay and shorter hours have resulted in

\***Richard G. Brodrick** (Highland Hospital, Fourteenth Avenue and Vallecito Place, Oakland). M. D. Cooper Medical College (Stanford University) 1892. Graduate study: University of Vienna, 1899 to 1903. Previous honors: Medical Department U. S. Navy, 1892 to 1899; Health Officer, San Francisco, 1908-09, 1910-15. Present hospital connections: Alameda County Hospital. Scientific organizations: Alameda County Medical Society; California Medical Association; American Medical Association. Present appointments: President-Elect American Hospital Association; Director of California Tuberculosis Association, also of California State Occupation Therapy Association; Advisor to the National Dietetic Council, etc. Practice limited to Hospital Construction, Organization and Management since 1915. Publications: Publications on Construction and Equipment of Hospitals; on Organization of Tax-Owned Hospitals; on Nursing Organization in Hospitals, etc.

an increased cost of home nursing, for, whereas formerly a nurse could be had for \$35 per week on twenty-four-hour duty, it now costs \$12 per day for a similar service.

What can doctors do to help solve this problem? In this age the specialists, who constitute a large percentage of the medical profession, and even men in general practice are apt to lose sight of the patient's financial problems or fail to ascertain if there be any and to recommend the employment of a graduate nurse or a practical nurse, the latter usually a woman who "likes to take care of sick people" and who very often has had no proper training.

Doctors can help in a very definite way toward the solution of the problem by fostering and backing the plan of hourly service in the home by visiting nurses.

In Oakland there is a Visiting Nurses' Association which is rapidly growing. These women, who are all graduate Registered Nurses, visit in the home and their service is paid for on an hourly basis.

**Sol Hyman** (San Francisco)—It is difficult to suggest a constructive method of increasing the number of bedside nurses through any action that may be initiated upon the part of the physician other than to reduce the period of training for them. This will undoubtedly attract a fairly large number of young women who now shrink from the long and arduous curriculum prescribed. But a year less of training period will not, and cannot, materially reduce the cost of the bedside nurse to the patient. The nurse now receives no more than a fair living. It will simply mean more nurses available to those who can pay. A surplus is not to be feared because there are too many other avenues now open to women, and the existence of a large number of unemployed nurses will shunt the future prospect into some other field.

The greater use of the available number of nurses is now beginning to be met by the visiting nurse. In some cities there have been organized visiting nurse associations, the deficit being met by a community chest or other public charity. This, of course, does not reduce costs, but merely distributes them—a form of insurance. In certain, particularly the more or less chronic, cases the full fee of a visiting nurse can be paid much to the advantage of the patient and this practice will no doubt grow as the service becomes better known.

The matter of the supply of bedside nurses is, of course, a purely economic one. The day of women becoming nurses for sentimental reasons is gone. The nurse has become an essential part of the social fabric. To increase the supply we must provide a means for insuring a good living with adequate provision for the future—if it can be done.

**Edna L. Barney** \*—Useful bedside nursing service without the title of R. N. would seem to be analogous to useful bedside medical service without

\***Edna L. Barney** (306 Irving Street, San Francisco). M. D. University of California, 1914; B. S. University of California, 1911; M. S. University of California, 1913. Graduate study: Internship University of California Hospital. Previous honors: Instructor in Surgery, University of California Medical School; Medical Superintendent Children's Hospital. Scientific Organizations: San Francisco County Medical Society; C. M. A.; A. M. A. Present appointments: Public Health. Publications: Various contributions to scientific and educational journals.



the title of M. D. The services of physician and nurse imply two professions which have advanced so much by mutual help that the status of one cannot be modified without similarly affecting the status of the other.

To procure nursing service at a less cost, it has been suggested that a nurse without surgical training would suffice for nonsurgical cases, such as "acute infections and metabolic disturbances." Would not this type of nurse, especially in rural districts, be confronted with the problems of isolation, and the special care and precautions incident to scarlet fever, diphtheria, typhoid and poliomyelitis; also the technique for giving insulin and other hypodermic medication? Does not the suggestion to sidestep surgical training overlook the fundamental fact that the crowning essential for a professional nurse is her consciousness of asepsis, which nowhere can be so thoroughly acquired as in her course of surgical training? Without this particular training for the professional nurse, the term "modern medicine" can have no meaning.

It is true that in hospitals a large amount of useful service is rendered by student nurses under the immediate guidance of R. N. supervisors, but outside of hospitals a useful service of lesser qualified nurses could not prevail. Any arrangement for outside nurses approaching a double standard of nursing education would soon result in endless confusion. The best that can be done for the outside cases of moderate means who require professional nursing is to act in accord with "quality, not quantity." This may be accomplished by accepting the part-time service of visiting nurses, an expedient which is being used in many cities with apparently good results.

As to shortening the time of hospital training—this can be done by introducing a one-year preparatory course for nurses into the curriculum of Junior Colleges throughout the state. This would relieve the student nurse of the hardships resulting from the combination of attending classes and "being on duty," which combination now requires eleven hours, or so, daily. The applicants would come much better prepared and have a far better opportunity for concentration upon the actual training within the hospital; and there would be, no doubt, a corresponding advantage to those hospital patients more or less under the care of the student nurses. As to remuneration for the nurse, we must bear in mind that considering her responsibility, skill, and hours of service, she now receives less monetary recompense than is paid for any other service of equal importance.

After all is said and done, the present-day hospital expense is the heavy burden to the sick of moderate means. The nurse is only a part of that expense. Moreover there is a great deal that can be said about home care in sickness, and about "what doctors can do" for useful bedside attendance. There are many patients of moderate means in hospitals who, with a visiting nurse and a willing doctor, could have ample care in the home at much less expense than in the hospital with private room and private nurse; and in still milder cases the doctor might, to a greater extent, emulate the much and deservedly lauded old-time family physician; be will-

ing to mingle more time and congeniality with the handicaps in homes of moderate pretensions; learn to improvise against many little and some big inconveniences, and give kindly repeated instructions to members of the family, not only for relieving the present stress of bedside difficulty, but for guarding against like difficulties in the future; and withal, hearken to that old-time spirit which, in the hour of sickness, whispered the meaning of home and the faithful family doctor.

**N. N. Wood** \*—There is no question in my mind but that at the present time, and possibly more in the future, it will be necessary to do a large amount of actual bedside nursing with other than graduate nurses, whether these others be called maids, practical nurses, nurse maids, attendants, or by some new name, since much of this bedside work is, in my judgment, not really of a quality to justify its being regarded as the proper work of a *profession* unless we are to assume that the professional aspect of such work pertains to the heart, that is, a service of love, and is to be found in the consecration to such a needed service, as obtains in the ministry of personal work rather than in the technical learning and highly developed intelligence required for a service, such as distinguishes the three learned professions of theology, law and medicine.

I believe that the profession of nursing is the greatest open to women, but that the claim that much of the bedside nursing required constitutes a profession is made in error, unless that claim is based on the argument that the service given is rendered as a matter of love and not as a demonstration of learning.

**Anna C. Jamme, R. N.** (Director, Bureau of Registration of Nurses, California State Board of Health)—The question rests on the fundamental basis of (a) supply and demand of nurses; (b) economic situation; (c) conditions of work.

Apparently the supply of graduate registered nurses is on an average sufficient, or we would not hear of so much unemployment. The difficulty is not supply, but distribution; nurses congregate in large cities and are unwilling to go to rural communities. Occasionally the supply may fall short, as in times

\***Neal Naramore Wood** (Los Angeles General Hospital, 1100 Mission Road, Los Angeles). M. D. University of Michigan, 1908. Graduate study: Three years, 1908-11, in clinical work, Department of Obstetrics and Gynecology, University Hospital, Ann Arbor, Michigan; the three last years with rank of instructor in Obstetrics and Gynecology in the Medical School; also honor graduate Army Medical School, 1912. Previous honors: Alpha Omega Alpha, Sigma Ki; Medical Corps, U. S. Army, 1912 to 1918, Major and Lieutenant-Colonel temporarily during the war; Sanitary Officer during the period of building Camp Custer. Present hospital connections: Medical Director and Superintendent of Los Angeles General Hospital (1243 beds); Lieutenant-Colonel M. O. R. C. Scientific organizations: Los Angeles County Medical Society; C. M. A.; A. M. A.; Association Military Surgeons; L. A. Obstet. Soc. Practice limited to Hospital Administration since 1917 (except for six months in 1919). Publications: Several papers on various phases of the practice of Obstetrics and Gynecology from the University Hospital, 1908 to 1911, "The Physician and Surgeon," Ann Arbor and Detroit; "The Watkins Interposition Operation in the Treatment of Procidencia," Proceedings of the Medical Society of Hawaii, 1915; "The Effect of the War in Stimulating Public Interest"; "Free Medical and Hospital Service—An analysis of Principles, Problems and Results," Better Health, September, 1925.

of widespread illness and at certain seasons of the year.

The economic situation may have an influence upon nurses drifting away from private nursing. The cost of shelter, food, clothing, is high in comparison with the private nurse's income. She cannot rely upon constant employment; her fee is more or less fixed (\$6 to \$10 a day); many times she has trouble in collecting her bill, and even though she may be constantly employed she can have only a fair income, which may average not more than \$125 a month.

Conditions of work on the whole are difficult for the private nurse, whether in the hospital or in the home. She is on duty many consecutive hours; she has little time for culture or restful recreation; considerable physical wear and tear; no paid vacation; and remuneration does not increase according to efficiency. Consequently, nurses are seeking branches of work other than private nursing, even at comparatively low salaries, for the reason that they may have constant employment, home life, vacation time, more regular hours of duty, activity while on duty, professional growth, and less physical wear and tear.

Looking toward the solution, namely, to bring skilled nursing to all classes of people at a price which they can afford is a matter of sympathetic co-operative action between the public, doctors and nurses. Efforts have been made over a period of many years to meet the situation satisfactorily by the following means:

Group nursing in hospitals on an eight-hour basis. One nurse may take care of two, three, or even four patients, and the expense shared by the patients. There is often a great wastage of the nurse's time in caring for one patient after the acute stage is passed.

Hourly nursing in the home, whereby a patient may have the services of a skilled nurse for the number of hours necessary for care and treatment at a price which will not be as excessive as for the services of a full-time nurse, the nurse to be on salary under the direction of an organization.

Visiting nursing brings skilled care for shorter periods to patients in the home. This is not necessarily a gratuitous service, but can be paid for in accordance with the patient's ability to pay.

The practical nurse may be well utilized in chronic nursing, or in cases requiring less knowledge and skill. She is, however, not much less expensive than the registered nurse and there is no control of her fees or work, unless she is attached to a registry that will do this.

To improve the distribution of the existing supply of skilled nursing and to make it available to a larger number of people is a study that may be participated in by doctors, nurses, and interested lay people. However, the central idea around which all plans should be grouped is that the quality of work should be upheld and not lowered; that the problem itself should be attacked and not the nurse. We should aim to bring more efficient nursing to more people rather than an increase in the number of inefficient nurses to serve more people.

**Dorothy Ledyard, R. N.\***—We have been accustomed to accepting the truth of old adages handed down from time immemorial without question. One of these, "A little knowledge is a dangerous thing," causes one to wonder just what constitutes "a little knowledge." Who among the wisest of us can claim in our brief years more than that? On the contrary, there might be instances when total ignorance would have fatal results.

The oldest and even yet the most popular profession open to women is that of wife and mother, yet little if any systematic training is given women for homemaking. The great majority of girls marry with but little conception of their future duties, and practically no training to help them meet the heavy responsibilities of wife and mother.

Perhaps the logical solution to the problem of increasing "the number of useful bedside nurses" lies in teaching to every girl who graduates from high school the fundamental relationships between individual health and cleanliness and sanitation; efficient and healthful methods of meeting the normal problems of the care of the baby, the growing child and the aged in the home; teaching and developing some manual skill in the care of the sick under home conditions and according to physician's directions.

Is there any reason why any intelligent girl or woman cannot learn how to handle, dress and feed babies and small children intelligently and skillfully; why they cannot learn how to make a patient comfortable; give a bed bath; change the linen of an occupied bed; take temperature, pulse and respiration rate accurately; and to follow intelligently the instructions of the physician?

Only prolonged and careful training, such as good hospital training schools afford, can furnish the skill and judgment required in nursing persons who are seriously ill. Upon the trained nurse the modern practice of medicine makes great and ever-increasing demands. Good will and sympathy are no longer enough. Amateur nursing, even when performed with the best intentions, may involve grave dangers for persons who are seriously sick.

Such a course for girls and women can be in no sense regarded as a substitute for a nurse's training, and procedures requiring technical skill should not be included. But such a preparation must make possible earlier recognition of symptoms of disease and the necessity for early medical consultation and correction of physical defects, and insure more intelligent care of communicable disease.

Since approximately 90 per cent of all sick persons in the U. S. are cared for at home, even in cities where hospital facilities are good, it is reasonable to assume that at least 50 per cent of this 90 per cent must be cared for by members of the family. If we intelligently train our women to be prepared to give

\*Dorothy M. Ledyard (Red Cross, San Francisco). R. N. Children's Hospital School of Nursing, 1917; A. B. Mills College. Graduate study: Public Health course Western Reserve University, 1919; King's College for Women, London, 1921; one year International scholarship. Previous honors: With Red Cross during war; food survey in Germany following war. Present connections: Assistant National Director of Nursing, American Red Cross, San Francisco branch. Publications: Several on nursing subjects; responsible for page on Red Cross activities in the Pacific Coast Journal of Nursing.



simple nursing care and to call for medical advice before the disease becomes too serious, we are solving, to some extent at least, the problem of the shortage of nurses.

**Howard H. Johnson** \*—In the absence of war or pestilence our problem seems to be wholly social and economic. In emergency almost any woman will do her part as a nurse without thought of remuneration.

Assuming conditions which exist today, we have some twenty pursuits other than bedside nursing in which a registered nurse may engage, most of them with more pay, shorter and more agreeable hours in the long run than are available in bedside nursing. That registered nurses do remain at bedside nursing seems remarkable in many instances and the result of various reasons in others.

The original supply of students depends in quality and quantity upon the resultant of several forces, principally the ones which have to do with the "urge" to be of service to humanity, and, secondly, social, financial and other gain, for the young woman selecting her lifework.

The average pay of a registered nurse is 50 cents an hour or \$6 for twelve hours' work, meals furnished. The seamstress receives 65 cents to \$1 an hour for eight hours' work; domestic servants on part-time receive 50 cents to 75 cents an hour; stenographers and secretaries receive 40 cents to 65 cents an hour for an eight-hour day, forty-four hours a week and two to four weeks' vacation with pay. The nurse, after a long hard case, takes a rest at her own expense. Her vacations and time when patients do not employ her are not only nonproductive, but cost money in room and board so that her average monthly income may be approximately \$125, with collections difficult. Stenographers and secretaries again have an opportunity for advancement, whereas the bedside nurse is paid \$6 a day when she graduates and the same ten years later.

This much from the standpoint of the nurse. From the standpoint of the doctor and patient let us assume a composite case: a severe abdominal operation with pneumonia as a complication. Two of the best nurses available are engaged, cost to the patient \$12 per day; doctor knows that "drips, drugs, temperatures, pulse and general condition" will be accurately observed and that he will be called if needed, so that he is not compelled then to sit with the patient or call frequently in order that he may keep watch of progress, but is free to go about his practice as usual. In ten days the day nurse is relieved by a member of the family who has been taught to take and record temperatures and pulse. In two weeks the night nurse is gone; cost \$144 for nursing, which nursing made the doctor, family and patient comfortable throughout the trying two

weeks. The doctor then suggests he send either a visiting nurse to "do up the patient" or his own full-time nurse whom he employs and pays regularly at the rate of \$150 a month, saying he will add the cost of this nursing to his bill. Depending upon the family circumstances, nursing has cost at the end of the illness \$165—one payment on the Cadillac or five payments on the Ford. Question: Which was the most important, the patient or the car?

Between this extreme where nothing but the best can be employed and the opposite extreme where the patient only needs watching, water, feeding, medicine and an attendant who has the ability to use a telephone, the doctor could employ visiting nurses' "hourly nursing," his own "full-time nurse," relatives or, most expensive of all, the "practical nurse" at \$4 a day, \$25 a week, and little real help or "personality," which seems to mean so much nowadays.

Doctors or nurses have done a few things to make more bedside nurses available in that they have done away with so-called "maid's work" in training; the training period has also been reduced to twenty-eight months and might be reduced four to six months more if some of the "book work" (hygiene, physiology, anatomy, dietetics) and "classroom" demonstrating (bed making, temperatures, pulse, bathing irrigations, etc.) could be given in the grammar and high schools, much to the relief of schools of nursing and to the everlasting benefit of humanity and all women who expect to have sickness or children in the family.

Many patients demand nursing service long after the need for it has past. Some relatives find it inconvenient to substitute for the registered nurse and some require a mental jog for necessary rearrangement of the budget in case sickness interferes with the payments on the radio, the Ford or the fur coat, but withal it is encouraging to note the repeated evidences of readiness and anxiety to do anything and everything that may bring peace, comfort or skill to the patient if the matter be taken up in a businesslike manner soon enough after the onset of illness. It would seem reasonable to add illness, from the standpoint of certainty, to the inevitable death and taxes, when perhaps budgets and insurance for illness could be invoked to assist in necessary outlays without inviting financial disaster.

The problem of the nurse is similar to that of the other agencies of medicine—doctors and hospitals. Doctors must be provided with an income which will allow them to live in circumstances similar to those in which men of similar attainments live. Hospitals must pay bills for bread, meat, drugs, water and electricity, or these commodities will not be delivered to them. Executives, dietitians, office help and engineers must be paid salaries which will attract capable people from similar pursuits in the business world in order that a high standard of service may be delivered to the doctor and the patient. Bills and salaries must be paid by the patient, endowments or public funds. Less than \$2 per month per person is required to meet all expense of illness. Why should the vitally necessary requirements for life and health be carried by endow-

\*Howard H. Johnson (210 San Leandro Way, San Francisco). M. D. University of Cincinnati, 1903. Graduate study: Intern and Houseman Cincinnati General Hospital, 1903-05. Previous honors: Colonel Medical Corps Surgeon-General's Office, Hospital Division, 1916-17; Hospitalization: First and Second Army Headquarters, France, 1918. Present hospital connections: Medical Director St. Luke's Hospital and Chinese Hospital, San Francisco. Scientific organizations: San Francisco County Medical Society, California Medical Association, American College of Surgeons. Practice limited to Hospital Administration, planning, and construction.

ments, public funds or the doctor and nurse when radios, automobiles and cosmetics cost the public infinitely more and are seemingly paid for with avidity?

With an apparent surplus of registered nurses in cities during dull seasons, further competition from an inferior grade or class of nurse or attendant will drive the registered nurse from the field if the attendant can be attracted from some other field of endeavor by anything less in the way of pay than the registered nurse receives now.

**L. B. Rogers**\*—In my opinion, the solution of the problem presented does not lie in the substitution of less skilled persons to take care of the sick for a lower remuneration. Trained nurses are paid little enough and I doubt if women with less training would work for a lower wage. There are many people who will mortgage their future buying high-priced automobiles on time payments, but who would complain very strenuously when obliged to pay \$6 per day for a trained nurse.

I have no specific remedy to offer to cure the condition, but I believe it can be improved if doctors will encourage the following:

1. Group nursing by skilled trained nurses:
  - (a) In hospitals
  - (b) In private homes.
2. Accident and health insurance or hospital bonds in some form where the expenses of physicians and nurses can be anticipated and guaranteed for a definite monthly sum.

\***L. B. Rogers** (Saint Francis Hospital, San Francisco). M. D. New York University and Bellevue Hospital Medical College, 1905. Graduate study: Intern Bellevue Hospital, New York City, 1905-07; Intern Women's Hospital, New York City, 1907-08. Present hospital connections: Managing Director Saint Francis Hospital. Practice limited to hospital planning, construction, and administration. Previous honors and services: 1914, assisted in planning and organizing the American Ambulance in Paris; attending surgeon September, 1914, to February, 1915. From February, 1915, to September, 1915, with the Serbian government in hospital work during the typhus epidemic of 1915. Regimental Surgeon of the Sixty-fourth Infantry, Seventh Division. Assistant Division Surgeon and Acting Division Surgeon, Seventh Division. Chief Medical Adviser in Bureau of War Risk Insurance in 1919. District Manager Veterans' Bureau, 1921. Executive Officer and Assistant Director Veterans' Bureau, 1922-23. Medical Director Veterans' Bureau, 1923-24. Commanding Officer United States Veterans' Hospital, New Haven, Connecticut, 1925. Organizations: Bellevue Hospital Society and Woman's Hospital Society, New York; New Haven County Medical Society; Connecticut Medical Society; American Medical Association; American Public Health Association; American Hospital Association.

**A code of ethics** embodying the principles of professional conduct to govern the profession of chemistry has been formulated and adopted by the American Institute of Chemists. This code of ethics merits public esteem and justifies confidence in the integrity of the chemist. The institute has established a standard of proficiency of such excellence as to insure competent and efficient service on the part of its members.—**M. L. Crossley**, Science.

**Health and morals** are not infrequently interdependent, notably in the case of venereal diseases; but the regulation of morals may well be left to spiritual advisers, those who are or should be responsible for the bringing up of the young in the home, to the schools, to public opinion and, when immoral acts constitute infringement of the penal laws, to the police authorities.—**Matthias Nicoll, Jr.**, J. A. M. A.

**Henry James** compared mind and faith cures, and concluded that a mind cure requires no faith, while a faith cure requires no mind.—**Federation Bulletin**.

## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

### KYPHOSIS DORSALIS ADOLESCENTIUM

REPORT OF A CASE

By **A. GOTTlieb**\*

The rarity of this affection of the adolescent spine and the questionability of prognosis and treatment prompt me to report this case; especially so because of its improvement in a short time of three months under ultraviolet radiation and brace wearing.

**I. B.**, a schoolboy of 16, with spinal deformity accompanied by fatigue but without pain. While previously in perfect health, the dorsal region of the spine began to curve about two years ago without any known cause. Corrective school gymnastics seems to have aggravated the deformity. Has had no previous orthopedic treatment.

**Examination**—Healthy-looking, muscular boy, well nourished and developed. No signs of rachitic rosary nor epiphyseal enlargements of deformities of the extremities. A round kyphoscoliosis is present in the mid-dorsal region which is fixed and cannot be obliterated by suspension. There is limitation of motion in this area without any limitation on the rest of the spine. No muscle spasm nor tenderness on pressure or percussion. A tentative diagnosis of vertebral epiphysitis was made and was substantiated later by further clinical, radiological, and laboratory findings.

The x-ray (Figures 1 and 2) revealed a slight double scoliosis and moderate kyphosis. The intervertebral spaces were diminished in width, were cloudy, mottled, and irregular. The outlines of the vertebral bodies were indistinct; the epiphysis enlarged, moth-eaten, and frayed.

To satisfy a worrying mother the boy was examined by **Dr. K. Fishel**, who determined clinically, by x-ray and tuberculin tests, that no primary tuberculous lung focus existed.

Notwithstanding a negative family and personal history of syphilis, the blood Wassermann was made and found negative.

**Treatment**—Patient was allowed to continue school work, but prohibited from participating in exercises and from doing weight-carrying. Was ordered to rest in the recumbent position several hours a day and to expose the body systematically to the sun and air. In addition to this he was exposed to incandescent light and to artificial ultraviolet rays every other day. For the protection of the spine and for a possible decrease of the deformity he was provided with a modified Taylor brace with pads to exert pressure upon the spinal prominence. After three months of this therapy the spinal deformity was visibly lessened, proved by tracings and by the doubling of the thickness of the pressure pads in the brace.

The x-ray showed at this time a definite restoration of form of the vertebral bodies; considerable deposit of

\***A. Gottlieb** (607 South Hill Street, Los Angeles). M. D. College of Physicians and Surgeons, Columbia University, 1910. Graduate study: Franklin Hospital, San Francisco, 1910-11; Orthopedic Clinic of Heidelberg and Munich, 1914; Massachusetts General Hospital, 1920. Previous honors: Orthopedic surgeon of Mount Zion Hospital; University of California Outpatient Department; San Francisco Polyclinic. Present hospital connections: Children's; Clara Barton and Kaspar Cohn hospitals, Los Angeles. Scientific organizations: Los Angeles County Medical Society; C. M. A.; A. M. A.; Fellow of American College of Physiotherapy and Radiology. Present appointments: Associate Editor of American Journal of Physical Therapy. Practice limited to Orthopedic Surgery since 1914. Publications: "Localized Muscle Contractures" (California and Western Medicine, May, 1918); "Graphic Presentation of Finger Deformity" (S. G. O., October, 1919); "Industrial Injuries, etc." (Northwestern Med., December, 1919); "Prostatic Backache" (Med. Record, July, 1920); "Arch Supports, etc." (J. A. M. A., January, 1924); and ten more articles on orthopedic subjects in various leading medical publications.





Figure 1—Moth-eaten and frayed appearance of anterior edges of vertebral bodies of seventh to tenth dorsal vertebrae.

Figure 2—Intervertebral spaces slightly wider, cloudy, irregular. Substance of bodies appear faded, atrophic.

Figure 3—Restitution of bone: better outline, less irregularity and fraying. Beginning hypertrophic changes on the edges.

bone and filling in of the area of rarification; the moth-eaten and frayed outlines had disappeared to a great extent, but spurlike changes were seen on the front edges of the epiphysis, as is found in cases of spondylitis deformans.



Figure 4—Contour of bodies more definite and clearer outline of the bone substance, as if atrophy is disappearing.

#### COMMENTS

1. This affection has been described under various names: *kyphosis dorsalis juvenilis*,<sup>1</sup> *kyphosis dorsalis adolescentium*,<sup>2</sup> *vertebral apiphysitis*,<sup>3</sup> and has been classed among other weight-bearing deformities of the adolescent age.

2. It is the result of the preponderance of the functional demands upon the spinal column over its functional capacity. The diminution of this capacity affects the deformity in virtue of bone changes, the nature of which is still under dispute.

3. Treatment should strive to reduce the functional requirements upon the spine, i. e., weight-bearing to be limited, recumbency practiced and protection enforced, and should aim at the increase of functional ability of the spinal scoliotome by stimulating ossification; sun and ultraviolet exposures, etc.

4. Occurring in the ages between 10 and 20, within the period when manual labor is begun, the industrial surgeon should recognize this condition and guard functional overstrain, lest compensation claims may be forthcoming if the deformity develops in the course of employment.

1. H. Scheuerman: *Ztsch. f. orthop. Chir.*, 41:305, 1921.

2. C. Mau: *Ztsch. f. orthop. Chir.*, 46:145, 1924.

3. J. Buchman: *Jour. of bone and joint surg.*, 4:814 (October), 1925.

The health commissioner and the angler have much in common. One must use many kinds of bait to induce some people to accept health truths; sometimes the landing net of a strong compulsion is essential to accomplishment; there are few that rise to any lure that may be put out, and supreme patience always is necessary.—*Ohio Health News*.

The prolonged and permanent assumption of governmental functions by unofficial bodies, when and if the governing officials are financially and personally able to undertake them, is in my opinion a mistaken policy and one which inevitably must defeat the end sought.—*Matthias Nicoll, Jr., J. A. M. A.*

# OXYCEPHALY AND RICKETS IN ONE OF A PAIR OF SINGLE OVUM TWINS

By F. F. GUNDRUM, M. D., *Sacramento*

OXYCEPHALY, a premature synostosis of various cranial sutures is rare, the cause unknown. The least vulnerable explanation is that of Stokes, "An abnormal twist in development or embryonal dysplasia." From a theoretical and speculative point of view, oxycephaly in one of a pair of univitelline twins is intriguing, though Newman says, "only in one character are the members of a polyembryonic set always identical. They are always of the same sex. In all other respects intra set differences of a more or less radical character exist." The oxycephalic twin also had rickets, his brother did not; interesting inasmuch as they had been living

under identical environmental and feeding conditions.

## REPORT OF A CASE

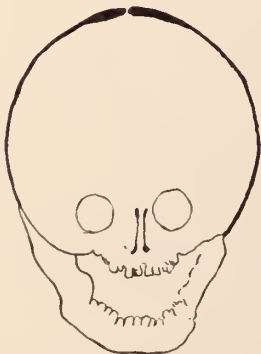
R; male child eight months old brought in by mother because of pallor, fretfulness, and failure to gain weight as rapidly as his twin brother H, who seemed healthy. The baby showed the pallor, rosary, expansion of long bone ends and bone tenderness of rickets. The anterior fontanelle instead of being larger than normal was closed and the head came to a well established peak on top. The mother consented to take both children to Zimmerman, whose x-ray films showed closure of cranial sutures as well as the changes characteristic of rickets. On account of the difficulty in reproducing negatives for publication, tracings of the bony outlines were made from the films.

Reginald Knight Smith, who had delivered the mother, very kindly looked up his records to find that "there was only one placenta," and he considers these indubitably univitelline twins.

Capital National Bank Building.



Left Leg "R." Rickets  
Left Leg "H"



Antero-Posterior Head "R"  
Fontanelle Absent  
Lateral Head "R"  
Lateral Head "H"  
Antero-Posterior Head "H"  
Shows Fontanelle Size



## EDITORIALS

### JAMES H. PARKINSON SAXTON TEMPLE POPE

Two families are desolate; physicians, patients, friends—thousands of each—are bereaved, and all citizens of California and many beyond mourn the passing of James H. Parkinson of Sacramento and Saxton Temple Pope of San Francisco.

Doctor Parkinson had been for many years a councilor and for several years chairman of the Council of the California Medical Association. Doctor Pope had been executive officer of the Association and a councilor. But the great work of both was in their service to the frail and suffering.

Both were leaders among men; general practitioners in the best sense of that phrase; worthy, useful citizens and, above all else, men. Biographical sketches by friends are published elsewhere in this issue.

### THE HOSPITAL CRISIS IN ENGLAND

Conservative medical and more general publications in England designate their hospital situation as a crisis—an economic, social and health crisis. As many of our hospital and health problems are quite similar to theirs, but as yet are less acute, and because we are traveling along the same road they have traveled, it may be helpful to notice their problems and what they are attempting for their solution.

England is the most completely institutionalized country in the world as relates to the care of dependents or those partially dependent because of ill health. There is a hospital or, perhaps more accurately expressed, an institutional bed for medical care for each 100 people, including the entire population of 38,000,000. Their hospitals are divided between government (local and general) and voluntary hospitals. The voluntary include public and private of several classes similar to those we have. As with us, many of those operated by local governments and particularly for the poor are not popular with the class of people they are designed to serve.

In an attempt to correct this situation, and at the same time to assist the voluntary hospitals with their finances, there has gradually grown up during the years a custom by which the government pays part or all the costs of service to certain classes of dependent and semi-dependent sick in the voluntary hospitals.

Even before the war their first disastrous step was taken when they passed a compulsory health insurance law modeled upon that of Germany. Under this law certain classes of people under certain conditions were compelled to pay a certain amount of their wages into a common government sick fund. When beneficiaries under the law were ill they were supplied service by doctors appointed by the government, and paid miserable wages or fees out of the government sick fund, a practice analogous to what is called lodge practice, hospital association or health association practice in this country. In its

effect this law not only branded people into classes as definitely as cowboys brand cattle, but it also branded the doctors and other agencies of health as well. A certain percentage of the doctors accepted service under this law and consequently accepted the small fees from patients who had no choice but to accept a service unsatisfactory alike to patient and doctor. Other physicians continued to serve their patients exclusively upon the basis of private arrangements.

Under the stringency of the war and the newer ideas of the equal rights of all citizens that grew out of the war, panel patients began to demand more and better hospital and medical service and they demanded that all evidence of discrimination be removed from them and that they be given the right of a personal choice in doctors, hospitals and other health agencies. These demands, and the large increase of illness and injury, forced the health problem to the front as one of the government's major problems.

After a restudy of their problems the government decided apparently that the doctors were the least dangerous link in their chain and they therefore reduced their already ridiculously low fees. But for once the worm turned; the panel doctors, as they are called, had also learned a lesson from Germany and they decided to refuse the cut and enforced their position by a strike, if you please, just as the panel doctors of Germany were on strike for similar reasons when the war broke out. After months of wrangling a patched-up truce was arrived at by the government compromising with the doctors as regards pay and extending somewhat the right of choice of doctor by the patients.

The hospital service became so financially embarrassed that something had to be done, and a largely attended conference was held by representatives of physicians, labor, hospitals, government, and other organizations. During the conference every agency presented its wishes and conclusions.

Mr. Somerville Hastings in speaking for labor said that "there had hitherto been in this country a very wealthy class and a poverty-stricken class, but in the future conditions would be such that the poor would depend less on the bounty of the rich, and probably the rich might have less to give. Experience had shown that social movements in the experimental stage were best managed by voluntary effort, but when such a movement became a necessity it was better to look for support to a central or a local authority." Continuing, this speaker contended "that payments by patients tended to act as a deterrent or to rob the poorest of the necessities of life and threatened to change hospitals into nursing homes for the middle classes. Workmen might be in this way contributing toward the cost of treatment of men better off than themselves. He did not doubt that people who were very poor considered it a disgrace and would suffer anything to hide it. Put very bluntly, he believed a man had only to be a good liar and dress poorly to enter any hospital, whither his riches might be.

"The only way out of this impasse was for the state to shoulder the responsibility of providing medical treatment for all who needed it. Labor looked upon health as a national concern, and saw the

danger of leaving it to charity or private enterprise; it desired treatment centers to be set up in outlying districts, local or cottage hospitals in the smaller towns, county hospitals conveniently situated, and national hospitals in the chief cities. It would organize intimate co-operation between all hospitals and, where necessary, make easy transfer from one to another. This would have to be evolved by stages. Poor-law infirmaries should be taken over by local health authorities and converted into first-class general hospitals for use without the taint of pauperism. Many of the country mansions now being offered for purchase would make good convalescent homes."

Another side of the question was emphasized by Viscount Knutsford when he said: "If hospitals were controlled by the state there would be no grace added to the duty, none of that spirit which added beauty to duty. The voluntary hospitals had brought to the sick the best medical attendance and nursing in the world. The recent committee of twelve eminent men took evidence about voluntary hospitals and stated it would be lamentable if by our apathy and folly it was suffered to fall into ruin, and they recommended a grant of a million pounds, which a parsimonious government reduced by a half. *All the progress in medicine and surgery had emanated from the voluntary hospitals; public or state-managed hospitals could not have approached such a record.* If there was pressure work at voluntary hospitals it was done; there was no question of 'down tools,' or thought of overtime; no doctor worked with his eye on the clock. To thank a surgeon for coming down to the hospital at midnight to perform an urgent operation would be to insult him. The spirit in regard to those who came to their doors was not 'what do you want?'; it was 'what can we do for you?' and the object was to do it in the kindest way possible."

In discussing remedies the speaker said that "he would have taken off the income tax figures all contributions to hospitals, and a similar deduction should be made from death duties. *The general practitioner should be helped, not harmed.* Surely the best plan was to strengthen what was admittedly good, rather than to change to a system which history did not support. *State management would satisfy nobody.*"

On behalf of the panel doctors a speaker said that "he hoped the libel would be put to rest that directly a doctor became a public servant he lost his better feelings. The Labor Party would go a long way toward placing the management of the hospitals in the hands of the doctors themselves."

Dr. John Buchan believed that "the hospital problem in its present form owed its origin to four factors: (1) an increasing urbanization of the population, with a deterioration of the living conditions and an incoming of many serious cases of illness requiring hospital treatment; (2) the awakening of the health conscience of the people, causing a demand for further hospital provision; (3) more care and thoughtfulness in the means for the relief of poverty; (4) the increasing improvement and complexity in medical and surgical science, bringing within scope of the hospital many cases which previously could be treated at home. A way out of the heavy demand was found in the establishment of

*rate-aided hospitals, and the work of these had so extended during fifty years that they now provided 75 per cent of the hospital accommodation of the country.*"

At the close of the three-day conference, perhaps the largest and most widely representative hospital conference ever held anywhere, the following resolutions were adopted:

"1. The accommodation, equipment, and finance of hospitals generally are inadequate and must be supplemented.

"2. The geographical distribution of hospitals is uneven, leading to overlapping and the lack of co-ordination. The unit of such co-ordination should be such as to include a sufficiently large population.

"3. There should be a closer relationship between voluntary hospitals themselves, between the voluntary hospitals and the various hospitals provided by local authorities, between the curative and preventive medical services, and between the hospitals and the private medical practitioner.

"4. Some form of public assistance is essential if a complete and adequate hospital system is to be maintained, and developments should be directed to preserving what is best in the present voluntary system.

"5. The infirmaries at present operated under the Poor Law should be thrown open to all citizens and removed from all taint of the Poor Law."

There is food for serious thought in this review, particularly as England's acute problems were reached by traveling over the road on which we are following.

#### THE FEAR OF HEART DISEASE

Letters from physicians tell us that the propaganda about the enormous prevalence of heart disease is being carried too far; that otherwise sane people, particularly mothers and school children, are getting a "heart consciousness" phobia or "fear complex" that is not calculated to serve well the cause of health. A prominent physician and medical teacher asks us to correct some of the "nonsense" that is being published about diseases of the heart. Other doctors claim that some of their patients are leaving them to consult heart specialists, cardiologists, clinics, and health centers whose publicity seems to indicate that they have special knowledge about heart trouble.

Heart disease is, and always has been, a serious malady. It takes many lives and cripples many more. Any intelligent physician can make a diagnosis with sufficient accuracy of any heart disease—*but no one else can.* Any educated physician can give good treatment, including advice—*no one else can.* Any educated physician can arrive at the cause of the trouble in the vast majority of patients with a fair degree of accuracy—*no one else can.* Any physician can do any and all these things in his office, the patient's home or elsewhere. He does not, except in rare instances, need any elaborate or special equipment. What he does need, what the patient needs, and what the patient cannot get in any other way, is the personal service of the physician.

The cause of health will not be permanently served by swelling heart disease statistics by including in them the functional disturbances incident to



adolescence, lack of sane living, jazzed emotions and pressure from gas-bloated stomachs. There is profit in "curing" such "heart diseases," and the supply of such patients is being promoted by too much cheap publicity.

Time will take care of this fad as it does of all others.

Physicians can help by informing the public of the facts in a dignified way, and by discouraging circus posters, headlines, pictures in colors of bleeding hearts on magazine covers, and other methods of soap-box orators. What is the poor patient to do when one group of "doctors" scatter firebrands of fear, and another group tell him of the dangers and consequences of "fear complexes"?

### THE NARROWING FIELD OF LIBERTY IN PERSONAL AND FAMILY HEALTH

Growing numbers of medical editors and medical authors are pointing out the increasing encroachments upon individual and family health liberty by the expansion of bureaucratic, corporation and other methods of organized practice. Medical organizations are becoming aroused, and some of them are taking action. This is hopeful, both in the interests of physicians and, more particularly, in the interests of the health of our citizens.

Corporations and other associations may not practice medicine legally in several states, and yet government, the greatest organization of all, ignores its own laws. The national government offers "free" (paid for out of taxes) individual medical service to many millions of people through nearly a score of departments and bureaus, conducted for the most part by nonmedically trained individuals holding their positions by political preferment. By dividing the country into districts, the population into classes and according to "previous condition of servitude," age, sex, occupation, infirmities, etc., they have the country very well covered with hospitals, clinics, health centers and correspondence courses operated by a surprisingly large retinue of employees of surprising varieties of attainments. They are nurtured by publications issued at public expense, some of which are essentially advertising matter, and by hordes of office and traveling agents on salaries.

National corporations, insurance, life extension; magazines with their medical departments; fraternal organizations; clubs, health and hospital associations and what-not urge all citizens to utilize their quantity-production medical services and live to be a hundred.

Mail-order "doctors" strain the resources of the postal authorities to handle their tons of medical advice and consultations by mail, and many of them also have local and traveling agents who are "high-pressure" salesmen.

State governments are also entering more and more into the practice of personal health through numerous bureaus and organizations; and wherever and whenever children or other citizens are brought together in crowds for examination, diagnosis, "inspection," "preclinical diagnosis," advice or other form of periodical medical or health service, one or all of several consequences ensue.

The doctors, nurses, teachers, technicians, clerks

or voluntary health workers who do the examining or give advice to the individual jeopardize the influence of the family doctor and thus introduce another disturbing element into the home, and threaten the faith of the individual in his health counselor.

The doctor who thus avails himself of the chance to examine another doctor's patient is all too frequently inclined to find, do, or advise something calculated to disturb the patient's faith in his former doctor, if not in all doctors, a faith that is still further jeopardized through incompetent medical service by incompetent persons.

There are people—plenty of them—who believe the substitution of impersonal medical service by government and private corporations for the personal service that characterizes present methods of the practice of medicine is desirable, and their conduct is with that end in view. Such opinions are not supported by much accumulated experience, and as an experiment it is fraught with many dangers.

The vast majority of physicians are opposed to the principle for sound reasons. The usual answer is that "of course doctors are opposed to state and corporation practice for selfish reasons." While this may be the motive of some, most physicians know that the socialization—governmental or otherwise—of medical practice would not decrease the private work of physicians who elected to continue to serve on a purely personal basis. It would practically force many young physicians to get their experience on a salary until their reputations warranted their changing to a private status. The ranks of such service would prove a haven for many doctors who for one good reason or another are not able to make a living in private practice. Some doctors also would prefer an assured salary to the greater risk of compensation on a fee basis and the greater energy necessary to succeed in the latter field. Salaried positions do not appeal to most doctors nor most people who need doctors' services. This is shown by the constant difficulty in securing enough doctors for the Army, Navy, Public Health, Veterans' Bureau, and similar dignified medical services. Many good doctors do go into these services, enjoy their work and make enviable names for themselves. That service of this kind is not fully appreciated by many who are entitled to it for nothing or only a nominal fee, every doctor in private practice knows full well.

Herein lies a great danger in extending official public health service so as to include personal health service for individuals, "free" alike to rich and poor. Some public health doctors thereby endanger their influence in real public health matters and they invite a public unrest, which is likely to be reflected in deficient appropriations even for their most important work.

The great promise of public health is not likely to be fulfilled as public medicine for individuals, but rather in exploring new fields and in more intensive action in those things calculated to prevent disease and promote the health of masses of people, leaving the field of personal health to collaborating personal health doctors.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

There is a vast difference between the physician giving charity to the needy one who applies to him for such services and the giving of his time and energy to the public in a matter that it is the plain duty of the public to provide for. The physician should give more heed and study to things of this kind and learn to discriminate between those matters which are truly altruistic and those which are not.—M. L. Harris, Chairman of the Judicial Council, A. M. A.

Little does the public know of the vast amount of uncompensated work in the alleviation of pain, sickness, and disease that is "carried on" by the medical profession. Perhaps there is no single fact which more sharply differentiates modern times from antiquity than the patient, quiet, unheralded, unrequited and generous service which doctors give to the poor patients in our great hospitals and elsewhere.—Lloyd Paul Stryker, Esq., Counsel Medical Society of New York, New York State J. Med.

The unwillingness of some physicians to render a certain service for less than a certain fixed fee is causing thousands of erstwhile prideful but poor citizens to join the vast drab army of charity seekers. This in our judgment is one of the causes for the growing demand for state medicine that none can fail to hear and none can silence save by placing the best of medical service within the reach of every citizen. Fortunately in most cases this is being done.—Editorial, Colorado Medicine.

The Rockefeller Foundation is rendering another excellent service in the publishing of "Methods and Problems of Medical Education," booklets.

The recent volume of the fourth series is an excellent expensively illustrated description of the "unit system" of clinical records as used at Presbyterian Hospital, New York. Some hospitals still cling to the obsolete methods of collecting and binding patients' records in volumes. This publication may help them.

The Foundation would render an equally fine service by issuing a publication showing the method of linking up a similar unit system of doctors' offices with that of hospitals.

There is a growing conviction that it is not always easy to distinguish between the harmful and the harmless with respect to the protozoa. Attendant circumstances, such as gastro-intestinal lesions, may sometimes render otherwise innocuous living forms objectionable in the alimentary canal for mechanical or other reasons. Furthermore, the number of expert diagnosticians in clinical protozoology is at present still somewhat limited.—J. A. M. A.

The vast majority of the medical profession will be found to be sympathetic with sane and efficient public health work, and there is something lacking in the character of a health administrator who is unable to obtain such sympathy.—Matthias Nicoll, Jr., New York State Health Commissioner, The Nation's Health.

American pediatric literature continues to contain many articles on breast feeding. Most of them, however, resemble closely articles which were written one hundred or more years ago, and contain little that is new. It is

doubtful whether the present method of expressing breast milk is any different from that in use generations ago, although it is better described. It is certain, however, that our forefathers did not use electrical breast pumps, which are proving most useful and are available to all at a moderate rental.—John Lovett Morse, Boston M. and S. J.

The editorial desk receives and discharges no inconsiderable amount of printed and mimeographed material classifiable as "available filler." Were one to use it all "as is" most of the content for the month would be on hand. Were one to write an introduction and express an opinion on each item the remaining portion of the white space available would be filled and thus all promoters could be accommodated.—Long Island M. J.

Ng Ka Py Now Medicine—Up to the time of going to press Chinese wine, known as ng ka py, was officially classed as a medicine and not a beverage, and could be imported and transported without violation of the Eighteenth Amendment or the Volstead Law.

In the last six years there have been no less than seven rulings, each changing the previous legal status of this liquid. Apparently no consideration was given to the question of its actual medicinal properties.—From an editorial, San Francisco Bulletin.

Now we know the psychology behind the naming of Pullman cars.

Osler—Three types of minds collaborate in medical progress: the investigating; the evaluating, collecting, blending, teaching; and the utilitarian—quantities rarely combined in one person. Osler combined these as did no other physician in history, and in this fact is the secret of his genius and greatness. The investigating side of this wonderful mind led Osler to blaze new trails into the unknown, which are now highways, but others have blazed even longer and clearer trails. His capacity for evaluating, collecting, teaching medical science is best shown in the periodic appearance of his *Principles and Practice of Medicine*, the *vade mecum* for doctors around the world, but others also have been great teachers. His ability to utilize medical knowledge and apply it wisely at the bedside made him a master healer, but others have been great healers. But history does not tell us of another who combined all these qualities within himself and who utilized them so well, and thus we see the secret of the most remarkable medical genius and the greatest physician of all time. He stands alone, peerless.

"We need controlled, conditioned air, just as we have controlled conditioned milk or controlled conditioned water." In these words J. E. Rush (*Jour. of American Society of Heating and Ventilating Engineers*, August, 1926), closes a discussion of ventilation that every doctor should read.

In "Post Mortems" and "Mere Mortals" (Doran) C. MacLaurin, doctor of medicine and teacher of surgery, University of Sidney, who died recently, undertakes an interesting scientific study of many characters of history, with particular reference to the possible influence their



certain or probable infirmities has had in directing the currents of human destiny.

Henry VIII, Anne Boleyn, Jeanne d'Arc, Edward Gibbon, Napoleon, Doctor Johnson, Nietzsche, Spinoza, Schopenhauer, Martin Luther, and many others are reinterpreted in the light of the trained medical historian. The picture is useful, but it is not a pretty one.

Physicians may profit from the stories, but the books should not be read by persons with unformed minds, and they certainly are not suitable companions for the young.

A town started to install street lights, but when the fixtures were erected and before the globes had been put in, a flock of birds built nests in the empty sockets. The state law forbids the disturbance of a bird's nest.

And now the town is waiting for the birds to tear down their nests so it can legally light its streets.—Nation's Business.

There is now no reason for medicine hiding behind anything; there is every reason for her coming out into the noonday sun and keeping herself on exhibit. Advertise to the world more and more what medical science has done and is doing for the comfort and happiness of every man, woman, and child; and less and less how some doctor "performed a delicate operation," or has some prominent person under his care.—Editorial, South. M. and S., July, 1926.

And you fellows are so amazingly silent. Not long ago I heard a public speaker say: "Evolution! Heredity! I am sick of the words! There is just one heredity in this world of ours—we are the children of God!" I tell you it brought down the house. I glanced at Doc Jones; he didn't applaud; he was looking at a little boy near him who had the snuffles, and whose nose was beginning to saddle.

And I said, "Well, for land sake!"—Ohio Health News.

I just wonder when people in their ignorance will stop speaking about a case instead of a patient, and when physicians will stop talking about operating a case. Doctors who have attended ward schools should know better.—S. E. E., Indianapolis Medical Journal.

The Rockefeller Foundation Review for 1925 by George E. Vincent, president of the Foundation, a pamphlet of sixty pages, contains much information interesting to doctors.

The work of the foundation is so extensive and varied as to stagger the imagination of the average reader of its doings.

"The well-being of mankind throughout the world" from the Seal of the Foundation, typifies policies that are being carried forward by amazingly extensive plans and the expenditure of untold wealth. Many extracts of President Vincent's review have been published in the public press, but the report itself is so condensed that quotation or comment misses much of a picture already in miniature.

Physicians who need information for their patients about the Koch cancer treatment will find what they want in the Journal A. M. A. of June 21, 1926. Reprints of this editorial and article are available (A. M. A.) and a few of them wisely distributed will do much good.

A census prepared by the National Public Health Nursing Association gives a total of 11,171 public health nurses in the U. S. A. *There should be 100,000.*

Public health nurses are promoted and directed by 3269 agencies. *One hundred would be too many.* Fifty-one per cent of these directing agencies are governmental. *State medicine is prospering.* Fifty-nine per cent of the

3000+ counties have no public health nurses. *Nine per cent would be too many.*

Seventy-four per cent of these nurses are working in cities of over 10,000. *This is about the reverse of what should be.*

What are we going to do about it? Quien sabe!

Walter Addison Jayne's "The Healing Gods of Ancient Civilization" (Yale University Press) is all that its title suggests. The contents of this useful book of 500+ pages are well described by the publishers, who claim it to be "a definite summary of the period before the art of healing had come out of its primitive devotional and mythologic phase, its era of soothsaying and magic."

Any doctor who aspires to more than a modicum of medical culture will find pleasure and information in a leisurely perusal of this book.

In speaking before the Montana Medical Association recently, W. J. Mayo announced that, in the future, no physician or surgeon would be accepted on the staff of the Mayo Brothers' Hospital at Rochester who is not a member of the Medical Officers' Reserve Corps if he is physically fit.

The speaker also said that he is urging all members of the Mayo Brothers' staff to send their sons either to schools having reserve officers' training corps or to the citizens' military training camps. He declared that these youths are the backbone of the nation's future defense, and the cadets of today will be the officers of tomorrow.

In transmitting the newspaper clippings of this address, officers of the Army add: "We need all the help we can get to fill the small percentage of remaining vacancies in this Corps Area. Utah and Montana have already enrolled more than 100 per cent. Nevada has just sent in more applications than are necessary to fill its quota. Oregon and Wyoming are both 91 per cent filled. But California—with 61 per cent of all the doctors in the Corps Area—has only given about 62 per cent of its quota and still lacks 478 Medical Reserve Officers. The only way to fill these vacancies is to bring the matter again to the attention of the medical profession of California."

California, at least in certain sections, is not showing up well in the publicity about progress in completing the personnel of the M. O. R. C.

Physicians interested in knowing more of the importance of this movement to our country, and particularly to themselves, should address the Surgeon, Ninth Corps Area, Presidio, San Francisco.

Some rural legislators do not believe in the descent of man. Alas, that they should furnish such conclusive evidence in favor of the latest evolutionary theory that man is but a stage between the monkey and the ass.—Boston M. and S. J.

Some very estimable physicians seem to believe that dabbling in the unpleasant field of politics or attacking the quack on his own ground is undignified and tends to dishonor scientific medicine and lower its prestige, but we believe that there is little logic in this contention, for the more intelligent and better qualified elements in society have a responsibility with respect to those who are easily misled.—Editorial Boston M. and S. J.

Demosthenes McGinnis says that the trouble with extra teeth in the prohibition law is that they are so liable to become infected.—Philadelphia Evening Public Ledger.

Man can live without food for thirty days, without water for seven days, and without air for three minutes; but the air should be filtered through the trees, flavored with sunshine and washed with the dew of heaven.—Ohio Health News.

## MEDICAL ECONOMICS AND PUBLIC HEALTH

The Telephone Exchange of the Los Angeles County Medical Association continues to grow in interest and usefulness to physicians and the public.

"It is a well-known fact that Los Angeles is the headquarters of nearly every cult and ism which attempts to prey upon the bodily ills of human beings. The tourist and the newly arrived resident were absolutely at the mercy of these irregulars until the establishment of the Telephone Exchange. Formerly, in case of illness, the layman was compelled to ask for the name of a physician from a chance acquaintance, and too frequently received advice which resulted in their calling unqualified and often unlicensed fakers. As a result of years of education and propaganda it is generally known in this locality that by calling the Exchange, VAndike 1221, the names of several reputable and well-qualified practitioners or specialists may be obtained at once.

"The laity realizes that the Association has 'nothing to sell,' and as a result the Exchange is now regarded with a confidence which is of the greatest value to the medical profession in its war on sectarian and irregular healers.

"The Exchange is now recording more than 11,000 calls each month from patients who wish to locate their physicians. During April, 1926, calls were received from patients for more than 670 members of the Association."—Bulletin Los Angeles County Medical Association.

Aren't we baying at the moon in talking about taking public health out of politics? Is it possible under our form of government to make important public health positions less political than those of sheriff, chief of police, and any other major offices which are essentially parts of government?

There are just three methods of selecting public servants: by election, by appointment, and by so-called merit system. The first two are frankly political, and the other actually is a buffer method that produces a staggering number of misfits.

Theorists who orate about divorcing public health from politics forget that our government is politics in action; that politics is public opinion as expressed by voters; that health officers are servants of that government and cannot possibly be anything else. They cannot be above the government, and the only way they may avoid its mandates is to put public health on a religious basis. Religious fanatics are the only people permitted to practice personal health and public health medicine without a license from government.

The movement to promote the merit system of selecting public health officials seems to most of us to promise most, but the experiences of recent years have not been conducive to enthusiasm for it. One of the criticisms of the usual appointive method of selection is, that incompetents are selected under it and that changes in personnel are too frequent to permit uninterrupted progress.

It must not be forgotten that changes are also frequent among health officers selected by the so-called merit system and that lack of co-operation by other branches of government, by doctors and by the public may so nullify the efforts of a civil service health official that his accomplishments may be less than those of a less well prepared officer who holds the confidence and support of his fellow government officials and therefore an element at least of the nonofficial public.

Most of us believe in whole-time public health officials, and we believe that they should be selected with care, well paid, and discharged when they become misfits.

Public health, no more than personal health, can be crammed down the throats of people, nor may public officials be assured of greater security of tenure than

other servants of the public—at least not while we are a democracy governed by elected and appointed representatives or those selected by any other system not infallible.

The medical inspectors in our public schools will have to be shaken out of their torpor. I do not wish to be understood as saying that these inspectors have not accomplished any good, but things have reached a point where we cannot continue our present type of examination and be satisfied. You know the type of examination!—Louis I. Harris, New York Health Commissioner, Long Island M. J.

**Two Interesting Rulings**—Chief Counsel Bianchi of the California Board of Medical Examiners has given his opinion to the effect that those licensed to practice chiropractic are not entitled to practice obstetrics.

Attorney-General Webb rules that physicians and surgeons are "permitted to practice chiropractic without a license from the Chiropractic Board."

This decision resulted from the recent arrest of C. D. Crutcher, M. D., by the Chiropractic Board on the charge of practicing chiropractic without a license, as related in "news items" of the August issue of CALIFORNIA AND WESTERN MEDICINE.

**The 1925 report of J. J. Frey**, Chief Bureau of Dairy Control, California Department of Agriculture, contains information of value in promoting and protecting health.

The total production of milk fat in 1925 was no greater than the preceding year, being 125 + million pounds. The per capita consumption of butter for the year was 21.72 pounds; of cheese, 6.47 pounds; of cottage cheese, 2.54 pounds; and of ice cream, 2.63 gallons.

The production of milk increased from 92 + million to 101 + million gallons. According to a table showing the utilization of milk fat, increased use is being made of both market and condensed milk and cream and ice cream, but the proportion used as butter and cheese shows a corresponding decrease.

It must be apparent that the medical profession and the public health workers are one and indivisible, that they have a common cause, that they have a common ideal. If we dedicate ourselves to co-operative action along these lines and if you will make me your mouth-piece, so long as I enjoy tenure of office, I can be more vocal and apparently can be quoted more often than the rest of you, with good grace and without loss of professional dignity. By virtue of that fact you ought to instruct me, you ought to advise me continually of the problems that come home closely to you, and it is my hope and wish that I may be not only receptive and reasonably intelligent, but that I may be responsive and able to carry out the messages which you give me—messages which aim toward the promotion of public health. I hope that I may carry them out as well as it is possible to do and not discredit the medical profession, whose object is primarily the prevention of disease, whether it be in hospitals, or in the health department, or in our daily ministrations to patients. Your speech in the homes is so much more effective than the printed work which we aim to deliver under varied guises. Whether it be in the confines of the hospital or at the bedside we are scientific educators, and it is well that we work in concert.—Louis I. Harris, New York Health Commissioner, Long Island M. J.

**At the 1925 Session of the Tennessee Medical Society**—"Resolved, That all druggists in Tennessee who desire the promotion of medical science be requested to discontinue the sale of nostrums and quack medicines, and that in our purchase of drugs and medicines we will prefer such as may adopt this course."

The contract community doctor idea developed several years ago to assure medical service to communities



not otherwise able to get or to retain physicians is to have a further trial at Gove City, Kansas. Members pay \$12 to the bank every six months, which entitles them to regular medical service and medicine (not including obstetrics or surgery). People living outside of a ten-mile radius pay 75 cents per additional mile, extra.—Nebraska M. J.

We see medicine face to face with an industrial and commercial civilization struggling to adjust itself to new and strange conditions.

We see new forms of organization springing up; new forms of corporate effort shaping themselves and on every side a loosening of the personal relation of doctor and patient on which we firmly believe the safety of both depends.

The struggle is only beginning, but it will be sharp and decisive, for in the processes of incorporation and of machine-like organization that have affected the life of our time, medicine has been left behind. The next step is to organize this remaining "industry" properly and subject it to the well-known principles of scientific management. Shall we submit? We never will, for it is our belief that this mechanization of medicine cannot be accomplished with satisfaction or success, and that attempts in that direction impede real progress in solving the many problems that do and will confront us.

If we are right we must be able to offer something better and to demonstrate its value in action. We must ourselves reorganize medicine.—Bulletin of Medical Society of the County of Kings.

Dr. Charles H. Herty, says the "New York Times," recently pointed out that we spend annually \$1,015,000,000 to keep our 115,000,000 bodies in repair, as follows:

Drugs, including patent medicine.....	\$ 500,000,000
Doctors' services (estimated on basis of average income per doctor per year of \$1500) .....	220,000,000
Five per cent interest on the \$624,000,000 of hospital investments in lands, buildings and furnishings .....	31,000,000
Hospital maintenance .....	264,000,000
	<b>\$1,015,000,000</b>

The mere investiture of a man with the degree of Doctor of Medicine does not wipe out his instinctive human revolt against injustice and exploitation. Socialize the practice of medicine, as you inevitably will under state medicine, and the best men will seek other lines of endeavor, if any there be left, where their talents and abilities, unhampered by artificial bureaucratic restrictions, may have free play and proper recognition. And then in time we may witness the deplorable spectacle of medical men striking for higher wages. They struck in Ireland for \$35 per week. Or we may find the panelized doctor making a second visit to deliver the placenta, thus earning another small fee of which there must be many if their sum is to be sufficient to meet his monthly obligations. It has been so reported from Germany. Or we may see the American medical profession through committees of its more widely known members, soliciting their colleagues in other countries for money gifts to keep its members and their families from starvation. Have not such appeals as this come to us out of Austria?—L. L. Bigelow, Ohio State M. J.

Is our criticism of the various health agencies—official and unofficial—quite justified? It is not justified until medical men individually and collectively reassume or resume the functions that they have, consciously and unconsciously, permitted themselves to abandon. . . .

There is no question at all that the health department ought not to assume the function of medically treating cases except in a few special instances. It is our func-

tion, for instance, to care for communicable disease cases in hospitals, but we must not, under cover of that necessity, treat venereal disease cases.—Louis I. Harris, New York Health Commissioner, Long Island M. J.

The 1925 birth rate in New York State, 19.4, was the lowest ever recorded. Of the several large subdivisions of the state the rate was lowest (13.0) in the group of incorporated places under 2500 population. The birth rate in the rest of the rural territory was 14.2; in New York City, 20.3; and was highest, 21.2, in all the other urban communities considered as a unit.

The New York Department of Health urges parents to take their children to their private doctors for the toxin-antitoxin treatment. The department also holds periodic clinics to serve those who apply.

There is little question that the medical profession has had just cause for grievance against those public health officials who, taking advantage of their legal prerogatives, have ridden roughshod over practitioners of medicine in the furtherance of this or that plan of public health work, often ill-considered and ruthlessly carried out, totally without regard to the rights and privileges of the medical profession and not infrequently of the public.—Matthias Nicoll, Jr.

No person shall maintain, operate or conduct an x-ray laboratory or advertise or hold out to the public that an x-ray laboratory is maintained, operated or conducted, wherein radiographs are taken, diagnoses made of human beings examined or treated by x-rays, without a permit therefor issued by the Board of Health, or otherwise than in accordance with the terms of said permit and with the regulations of the said board.—Section 107, N. Y. Sanitary Code.

Just as soon as means by physicians are supplied for caring for children of preschool age and giving them the constant medical supervision and oversight to which they are entitled, the Health Department should remove itself from the picture.—Louis I. Harris, New York Health Commissioner, Long Island, M. J.

The associations of pharmacists of the United States have launched a movement to give physicians better day and night service in supplying biologics and emergency service in general. They feel these services to be an increasingly important service that should be handled by registered pharmacists everywhere.

The alleged medicinal efficacy of slightly radioactive waters and other slightly radioactive preparations has been found to be much misrepresented, say officials of the Bureau of Chemistry of the United States Department of Agriculture, who, in the enforcement of the Federal Food and Drugs Act, have made a nationwide survey of waters and drugs alleged to be radioactive.

The products analyzed for content of radium included hair tonics, bath compounds, suppositories, tissue creams, tonic tablets, face powders, ointments, mouth washes, demulcents, opiates, ophthalmic solutions, healing pads, and other preparations in solid, semi-solid and liquid form for which therapeutic value because of alleged radioactivity was claimed. Only 5 per cent of the products analyzed and claimed to be radioactive contained radium in sufficient quantities to render them entitled to consideration as therapeutic agents and then only in certain very limited conditions, say the officials.—United States Department of Agriculture Press Service.

Certain contagious diseases are absolutely prevent-

able now and parents should be ashamed to have their children catch them. Thanks to the many cults and anti-vaccination societies smallpox has so increased in California that we now rank with Russia in the number of cases of this deadly disease.—California Board of Health Weekly Bulletin.

In general it seems to me that trustees give far too little time and thought to the hospital; too often their position is much that of a figurehead; they attend meetings too infrequently and too perfunctorily; their contact with the professional staff in their work is too slight.—Henry A. Christian, *The Modern Hospital*.

Every newborn baby requires a bandage or binder to hold the navel dressing in place, to prevent rupture, and to keep the abdomen warm.

The Thermo-Tex Baby Binders fulfill these requirements; they are made of pure wool filling, long staple cotton warp, and contain no rubber. It is said that these binders will not slip and will not hinder respiration. They may be washed with soap and hot water, and dried on a flat surface without stretching.

The binders come in sets of three and are made in two sizes: 4 inches wide by 22½ inches long, and 6 inches wide by 18 inches long. They are manufactured by Becton, Dickinson & Co., Rutherford, New Jersey, advertisers in CALIFORNIA AND WESTERN MEDICINE.

"In purpose and policy the League stands for accomplishments that merit the fullest co-operation of the doctor. Members are pledged to assist in every way the ethical practice of Ophthalmology.

Only by enlisting the co-operation of the doctor can the League expand to its fullest usefulness to the medical profession.—Reproduced from an advertisement of the Opticians' League of the State of New York, carried in medical magazines."

An organization of opticians with these purposes should prosper. A similar organization ought to be helpful in other states.

Concerning free medical service to the well-to-do in the name of health conservation for the community, a well-known member of our Association informs us that the public schools in his small city, aided and encouraged by the Parent-Teachers' Association and a number of other uplift organizations, pulled off a stunt that, for downright imposition, takes the cake! The uplifters gave out the information publicly that enlarged tonsils and adenoid tissue are the cause of much ill health as well as mental backwardness in children, and that to correct this evil in the schools of the community an operative clinic would be held regularly on every Saturday morning, at which parents could bring their children for operative attention without charge, and that, figuratively speaking, the clinic would continue until every last tonsil in the community had been slaughtered. However, these uplifters counted their chickens before they were hatched, as a few self-respecting medical men who had been counted upon to do the work refused to be a party to such stimulation of dependency, and to add to the difficulties a given number of parents had the good sense to tell the school inspectors that they would have the tonsils and adenoid tissue removed from their children when and where they pleased, and that they would pay for the services like any other self-respecting individuals.—*Jour. Indiana M. A.*

The vote of the doctor is of vital importance to the welfare of our country. This places a special obligation upon him. In common with all good citizens he must help to decide issues that are to be decided at the polls. His obligation is enhanced through the fact of his education and his responsibilities, and again increased in importance by his special knowledge of public health matters, which are of vital import at this time. No doctor can afford to stay away from the polls this year, and no

doctor who goes to the polls without giving careful and thoughtful consideration to his obligations is measuring up to his responsibilities.—*Texas State J. Med.*

"Public health is today a definite and distinct science and those who practice in this field are members of an actual profession, a new one, perhaps, but a real one, nevertheless. *It is not a branch of medicine*, though physicians like to look upon it as such. . . .

"Public health, then, is the science and art of disease prevention, health promotion and life prolongation. It deals with man and his environment, both of which are controllable matters.

"The sanitary engineer was not only the epidemiologist who demonstrated the mode of infection (typhoid fever), but also the eradicator of the disease. The sanitary engineer has done the same service with the mosquito-borne diseases, malaria and yellow fever, and has likewise almost banished hookworm from North America. . . .

"It is estimated that there are at least 20,000 positions in this country in official or unofficial health work, though, of course, most of them are now occupied by so-called sanitarians. . . .

"A recent survey made by the American Public Health Association showed that 7 per cent of the health officers of seventy-two cities having a population of 100,000 or over had received neither college nor professional training."—James A. Tobey, *Scientific Monthly*, August, 1926.

"No amount of so-called health education for the masses, or singing songs about carrots and calories, or boosting the milk bottle, or swatting the fly, surely affected the body and mind of our own particular Jacks and Jills. . . .

"After all, this public health we hear so much about is nothing more nor less than the sum of our very own individual and personal healths. *There is no such thing as public health apart from the well-being of each child and parent of the land.* The information may well be public, but its application is personal. . . .

"The Sheppard-Towner law has carried the message of prenatal care to an army of grateful women in all our states, and still greater benefits will follow as the good news of preventive services for expectant mothers reaches every family in the land. The universal use of baby stations has, by keeping the healthy baby well, from birth to the age of one or two years, reduced the infant death rate from 250 to 75 out of every thousand babies born."—Haven Emerson, *Delineator*, September, 1926.

These are interesting utterances significant of the trends of public health as it is being promoted by some teachers in the field—"a new profession" for the practice of personal health medicine by the public health official. In a word, a new line of approach to the goal of state medicine.

Every mother, doctor, nurse, and other person who has had to advise or carry out the preparation, sterilization, storage, often transportation, and serving of synthetic baby food, will find their problem much simplified by the improved and simplified baby bottle basket designed by Dr. John Homer Woolsey and which is being distributed by the Sterile Baby Bottle Basket Company of San Francisco, whose advertisement is published regularly in CALIFORNIA AND WESTERN MEDICINE.

No one thing is contributing more to the deserved popularity of certified milk than the far-seeing progressive stand taken by certain associations of certified milk dealers and distributors. The national association is becoming quite active in national advertising, and we are particularly pleased to announce the beginning in this issue of a page advertisement of the California Certified Milk Producers' Association, with headquarters at Los Angeles.

California already holds an enviable position in infant mortality and nothing will contribute more to the further

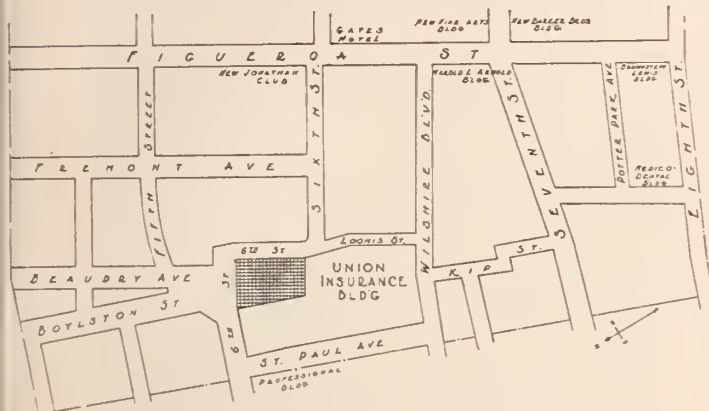


lowering of this mortality than the increased use of certified milk, and it is encouraging to see that the producers and distributors of this wonderful health food are taking advantage of the most promising method of increasing this consumption by advertising extensively through the legitimate medical publication of the doctors of the state.

The methods and standards of this association are those of the American Association of Medical Milk Commissions, which means standards devised by and wholly acceptable to the organized medical profession.

Your nearest certified dairy and distributor may be readily determined by examination of the advertisement and any special information about certified milk may be obtained by addressing the secretary of the association, 215 West Sixth Street, Los Angeles.

We are pleased to call attention to the very attractive advertising of the *Union Insurance Building*, Los Angeles, in this issue of *CALIFORNIA AND WESTERN MEDICINE*. Phy-



sicians and dentists and other medical agencies are rightly becoming more and more particular in the location of their offices and especially in who their neighbors are in the same building. We feel in promoting advertising of this kind that we are rendering service to physicians and to the public quite as much as we are to the ethical advertisers to whom we sell space.

Quite in keeping with this same principle is announced, beginning in this issue, the *California Medical Building*, Los Angeles, in connection with the Albert Soiland Radiological Clinic, which has been for some time, and will continue to be, a "paying guest" in our publication.

**P. D. L. Concentrated Cultures** of *Bacillus Acidophilus* as prepared by the Physicians' Diagnostic Laboratories, Oakland, California, are Council accepted products. This organization, whose announcements appear regularly in *CALIFORNIA AND WESTERN MEDICINE*, is prepared to supply the fresh active cultures of these organisms directly to patients upon the orders of physicians.

Among the most important and often least effectively served responsibilities of a physician are those unavoidably connected with the business side of his professional work and contacts. Old-fashioned collecting agencies do not and cannot meet the situation. The Doctors' Business Bureau, whose advertising in *CALIFORNIA AND WESTERN MEDICINE* is renewed in this issue, have by a happy combination of business services to doctors, established through many years of ethical contact a standing in this and nearby states and a reputation for fair dealing that is pleasing an ever enlarging clientele of members of the legitimate medical associations. They now have offices in the Balboa Building, San Francisco, and the Brockman Building, Los Angeles, where they invite the co-operation of members of the California Medical Association only.

**Filling the Physician's Prescription**—The latest report of the Connecticut Agricultural Experiment Station

notes that, of about 300 samples of drugs examined, nearly 30 per cent were substandard or otherwise illegal. An interesting departure from the usual program of inspection is represented by the study of the strength and quality of medicaments obtained on physicians' prescriptions. Three simple prescriptions were chosen. In the case of a prescription calling for a solution of potassium iodide of definite strength, twenty-seven of fifty-seven samples examined were within 5 per cent of the strength demanded; fifteen were within 10 per cent of that strength, and fourteen varied from the required strength by more than 10 per cent. Again, in the instance of a prescription calling for a solution of arsenous acid of the strength stated in the United States Pharmacopeia, two of twenty-two samples examined were not the article demanded, but another preparation of like arsenic content (Fowler's solution); nine varied from the required strength by more than 10 per cent, and ten samples were within 10 per cent of the strength demanded. The third prescription called for aromatic spirit of ammonia. Of forty-three samples examined twenty-five were less than 90 per cent of the required ammoniacal strength.—*Jour. A. M. A.*, July 3, 1926, p. 35.

It is with the prime purpose of reducing accidents and possible tragedies of this character that *CALIFORNIA AND WESTERN MEDICINE* encourages the advertising of pharmacies that are competent and make a business of filling prescriptions accurately and safely and of communicating, when questions of doubt arise, with physicians for preferring their wishes. It is upon this basis that the advertisement of the Exclusive Prescription Pharmacy of Los Angeles and Pasadena was accepted for the last and succeeding issues of our magazine, in addition to the advertisements of those pharmacies we have been carrying for a long time, as follows: Broemmell's Prescription Pharmacy, San Francisco; Exclusive Prescription Pharmacies, San Francisco; H. L. Ladd, San Francisco; Lengfeld's Pharmacy, San Francisco; O'Ferrall Dispensary.

Space cannot be purchased in *CALIFORNIA AND WESTERN MEDICINE* by a pharmacy not qualified and whose conduct is such as to warrant the conclusion that they are not rendering service of this quality. Legitimate pharmacists of the kind whose collaboration is needed by the medical profession and the public are recognizing more and more, by action of their national and state associations and by the ethics of individual pharmacists, that the high quality technical service they render to physicians and their clients is often of greater importance than the profits they may make from the sale of those things that go to make up the inventory of the average drug store.

An English investigator says it costs \$11 per month per person to keep clean. The Chicago and Illinois Hairdressers' Association reports that it costs \$7 a week to keep beautiful. Included in their dollar-a-day budget are: a shampoo, \$1; tonic rub, 50 cents; marcel wave, \$1.50; facial massage, \$2; manicure, \$1; eyebrow arch, \$1; grand total, \$7. The conclusion is that to be both clean and beautiful would cost \$44 per month.—*The Nation's Health*.

Every doctor should take a vacation for a few weeks each year. Get away from the regular grind. Not to engage in any kind of work, but a change from the regular routine of life. Different scenes, mingle with different people. It is a form of rest for the mind and body, and when a doctor returns to his labor he has more vigor and is better fitted for his professional duties. A change will help every doctor; he will feel better and it will prolong his life.—*Indianapolis Medical Journal*.

**Seventy-eighth Annual Session, A. M. A.** — The Board of Trustees of the American Medical Association has unanimously decided on May 16-20, 1927, as the date for the Seventy-eighth Annual Session of the Association, to be held in Washington, D. C. William Gerry Morgan will serve as chairman of the local committee of arrangements.

## CALIFORNIA MEDICAL ASSOCIATION

W. T. McARTHUR, M. D.....President  
 PERCY T. PHILLIPS, M. D.....President-Elect  
 ROBERT V. DAY.....Vice-President  
 EMMA W. POPE, M. D., San Francisco.....  
 .....Secretary and Associate Editor for California

### EXTENSION LECTURE PROGRAM

The yearly revision of the Extension Lecture program of the California Medical Association is in progress. Every lecturer on the present list of speakers has been invited to revise the titles of his lectures at this time and submit the revised program to this office for publication.

Any member not on the present list who desires to be included in this service should at this time furnish the State Association's office his name and program. When lantern slides are used to illustrate lectures a notation to that effect is helpful. Lecturers are permitted the use of the Association's lanterns in this service, and may secure them from the office, 1016 Balboa Building, between the hours of 9 a. m. and 5 p. m. daily, except on Saturday, when the office closes at noon.

It is earnestly hoped that interest in the Extension program will be stimulated by the submission of an enlarged and varied program.

### MEETING OF THE COUNCIL, C. M. A.

The next meeting of the Council of the C. M. A. will be held in the Hotel Biltmore, Los Angeles, September 18, 1926.

### MARIN COUNTY

**Marin County Medical Society** (reported by J. H. Kuser, secretary)—The Marin County Medical Society met on July 29 at 8 p. m. at Doctor Jones' office. President Lanrock called the meeting to order. The following members were present: W. F. Jones, F. M. Cannon, P. Day, C. F. Larson, G. M. Landrock, Charna Perry, E. W. Clark, and J. H. Kuser.

The minutes of the last meeting were read and approved. A communication from the A. M. A. in regard to addressing a summer school at Fairfax was read, and Doctor Cannon appointed by the chair to address the school on health matters and particularly to mention the two publications "Hygeia" and "Better Health" as the two mediums whereby the general public may get proper information on health matters.

A communication from the A. M. A. regarding medical relief in disaster was read and approved, and co-operation of the society as per enclosed suggestions to be counted on when necessity arises for same.



### SACRAMENTO COUNTY

**The Sacramento Society for Medical Improvement** (reported by Bert S. Thomas, secretary, society editor

pro tem.)—During the months of July and August this society does not meet in regular session, as the call of the mountains and sea takes most of the profession away during a portion of these two months. One of the first to hear the call of summer this year was Harry R. Baird, who toured the southern part of the state and parts of Mexico.

A recent visitor in our midst was our former colleague, "Jo" Crawford. Crawford has been in Philadelphia absorbing special instruction in ophthalmology and Big League baseball. He reports that he is leaving this best part of California permanently, and is to be established in San Francisco, associated with Walter S. Franklin.

Albert K. Dunlap, superintendent of the County Hospital, is now established in the recently completed beautiful, new superintendent's home, built on the grounds of the hospital.

A recent appointment is that of Leo W. Farrell, who succeeds Tholow Binkley as city emergency surgeon.

A radiogram any Saturday or Sunday will catch George S. Iki on our full northern trout streams.

Angus McKinnon, formerly intern at the Sisters' Hospital, and Norris R. Jones, who held a like position at the Sutter Hospital, have now opened offices for the practice of medicine in our city.

Harvey N. Strader, after many years of medical practice in Sacramento proper, has given up the active practice of medicine within the city and will confine his medical activities to calls at his home in north Sacramento.

Mr. Secretary (as Gundrum puts it) spent two weeks at Camp Del Monte with the 184th Infantry. This last is mentioned so that you may know that there is a true personal element in it when the advice is given to heed the call of J. Wilson Shiels and Colonel Munson:

"You will never enjoy an outing quite as pleasurable as that which can be afforded you by a Reserve commission in the Army."



### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Alex C. Soper, Jr., secretary)—The regular monthly meeting of the society was held at the Cottage Hospital, Monday, August 9, in the staff room. Present were twenty-three members, and Doctors Bianchi of Ventura and Merrill and Schultz of Santa Paula.

In the absence of the secretary P. C. Means was appointed to act in his stead.

Nathaniel H. Brush presented a paper read at the Oakland meeting on the "Treatment of Delirium Tremens," which was discussed by Bagby, Means, and Ullmann.

Henry J. Ullman talked on the "Removal of Hair by the X-Ray," and told of a visit made to him by "Jules Marton, Ph.D.," who has recently opened offices here and advertised widely his removal of hair; this man quickly exposed his ignorance of the fundamentals of x-ray therapy and use. Doctor Ullmann described the dangers of permanent injury to the skin by such treatment and quoted many world authorities warning of its harmful effects in a considerable percentage of cases. He also discussed what should be the attitude of registered physicians when questioned about this by our friends and patients. The man in question is said to have been fined \$100 in Los Angeles for practicing medicine without a license.

Rexwald Brown presented a carefully written paper on "Is the Medical Profession Coming Under Control of the Laity?" which discussed the attitude of the public toward our profession and its causes, urged interest and work in public affairs and more active control by physicians of hospitals, health work, etc. The paper was closely followed, and discussed by Doctors Ullmann, Ryan, Stevens, Allen Williams, Eaton, Brush, Pierce, Means, and Robinson.



## DEATHS

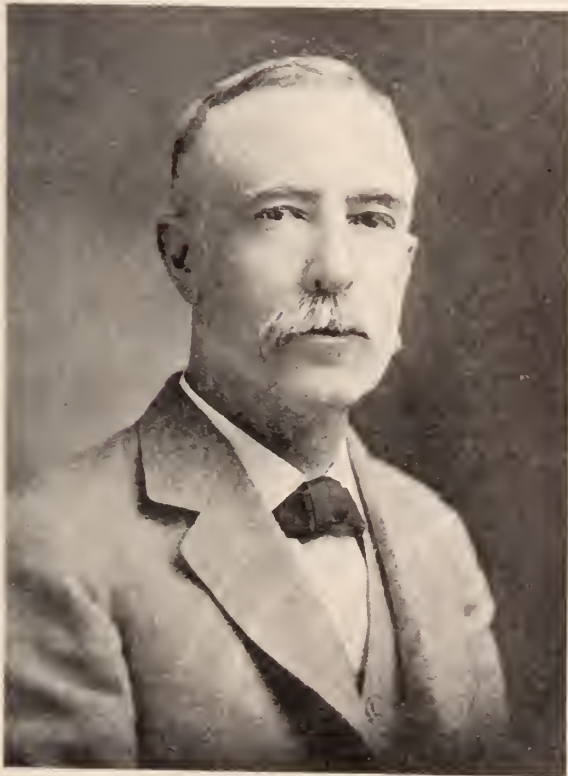
**Forrest, Richard Augustin.** Died at Occidental, July 13, 1926, age 66. Graduate of Bellevue Hospital Medical College, New York, 1883. Licensed in California in 1892. Doctor Forrest was a member of the Sonoma County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Murphy, Mary Turnbull.** Died at San Francisco, June 17, 1926. Graduate of Cooper Medical College, California, 1903, and licensed in California the same year. Doctor Murphy was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Myers, Mark C.** Died at American Falls, Idaho, July 17, 1926, age 65. Graduate of the University Medical College, Kansas City, Missouri, 1897. Licensed in California in 1908. Doctor Myers was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Southard, William Freeman.** Died at San Francisco, August 8, 1926, age 81. Graduate of the Medical School of Harvard University, Massachusetts, 1872. Licensed in California in 1881. Doctor Southard was a member of the San Francisco County Medical Society, the California Medical Association and a Fellow of the American Medical Association.

**Stansbury, Oscar.** Died at Chico, July 19, 1926, age 74. Graduate of the University School of Medicine, Baltimore, Maryland, 1873. Licensed in California in 1876. Doctor Stansbury was an affiliate member of the Butte County Medical Society where he practiced for over fifty years, the California Medical Association, and a Fellow of the American Medical Association. He was for several years a member of the State Board of Health.



JAMES H. PARKINSON  
1859-1926

On July 22, 1926, in the quiet of his Sierran retreat overlooking the American River Cañon, there passed a notable figure in the medical profession of California, Dr. James H. Parkinson of Sacramento. A member of

the California State Medical Society since 1884, he was its president in 1910, a member of the Council since 1906, and chairman of the Council for the last four years.

Perhaps more than any other member of the Society he devoted his life and energies to its interests, as with high ideals and a broad sense of justice he labored for the organization of the medical profession. An indefatigable worker, his sincerity, his Celtic pertinacity in pursuing his ideals, made all who came into contact with him respect him, and those who compromised with truth to fear him.

For twenty-two years, from 1887 to 1909, he edited and published, at the sacrifice of much time and money, the "Occidental Medical Times," a journal devoted to the advancement of medicine in California and the best interests of the medical profession.

His donation to the library of Cooper Medical College of journals received in exchange, together with many books, gave much encouragement to those who were struggling to build up a medical library in San Francisco. His interest in the library never flagged, and the Lane Medical Library into which the little college library grew is even now indebted to Doctor Parkinson for the remainder of his collection of medical books and pamphlets which he donated just before his death.

He was one of the leaders in the movement by which the American Medical Association was reorganized with the state societies as component parts and the state societies were reorganized with their county or district societies as corresponding component parts.

Born in Dalkey County, Ireland, October 28, 1859, he was licensed at the age of 20 by Kings Queens College of Physicians, Dublin, and in the following year, 1880, passed his examinations in the Royal College of Surgeons of Ireland. He began medical practice in London, but in the ensuing two years saw something of the world in voyages to South America, Japan, China, and the United States as ship's surgeon.

He came to Sacramento May 30, 1882, and at once joined the Sacramento Society for Medical Improvement; in his first year he became its secretary-treasurer, and in 1894 its president and some years later served again in that office.

In 1884 Doctor Parkinson joined the American Medical Association, the first member by application. He also retained his membership in the British Medical Association. He was a member and at one time president of the Northern District Medical Society of California. He was for seven years vice-president of the California State Board of Health, and in 1884 was city physician of Sacramento. He was a member of the Sutter Club of Sacramento, the Union League Club of San Francisco, and for many years a member of the Sierra Club. For forty years he was vestryman of St. Paul's Church, Sacramento.

In 1885 he married Mary W. Bonté, daughter of Dr. J. H. C. Bonté, episcopal clergyman, for many years secretary of the Board of Regents of the University of California. Two children were born, a son Jack, who survives him, and an older son, Fenton, who died in 1899. Mrs. Parkinson died in 1903.

His genius for public service still found time for civic duty, for he was a member of the Board of Freeholders which framed the present charter of the city of Sacramento, and at the time of his death was vice-president of the Sacramento Chamber of Commerce. In the World War he served twenty months in the United States Army, assigned to duty in western and eastern United States, and was charter member of the Sacramento Post of the American Legion No. 61.

Permit us again to say that Doctor Parkinson's life was devoted, as are the lives of few of us, unselfishly to the welfare of others. It is natural that with the imagination which made such a life possible there should be a sentimental side, though he concealed his affections. In Doctor Parkinson it was perhaps most evident in his love for the high Sierras. It was fitting when he found that he had lost the fight against an incurable disease that he should go to the mountains calmly to await the end.—Emmet Rixford.



SAXTON TEMPLE POPE  
1875-1926

**Saxton Temple Pope**—resourceful surgeon, adventurous bowman, picturesque personality—we shall miss him, we have not his like among us.

A full and fascinating life was crowded into his swift career of fifty years. Born in Texas, in an army garrison, amidst Indians, cowboys, desert and frontier, he soon developed that independence and self-reliance of thought and action which characterized him always.

The physician's life was in his blood; he was the third in a succession of doctors. Following his graduation in medicine at the University of California in 1899, and after a year as intern, he started country practice in the town of Watsonville, California. He remained there twelve years. His success was inevitable, for his practical skill was enhanced by a vivacious, arresting, captivating personality.

Persuaded to enter a larger field where his exceptional talents would receive wider recognition, he associated himself with the surgical department of the University of California Medical School.

In the fourteen years of his residence in San Francisco he carved for himself a distinctive place in its medical annals. He left an indelible impress on every person, group, and organization with which he came in contact. He placed himself at the forefront both in private practice and in surgical teaching. Those who knew him well can readily understand with what ease he accomplished this.

Saxton Pope was fearless bodily and intellectually. He was a daring surgeon, a courageous hunter, and a free lance. Loyal to his friends he was nevertheless bound to no group or clique. He went whither he pleased and with whom he pleased. His was the power to make lifelong friends with all who came within his spell.

His mentality was distinctive. He was an entertaining speaker and his manner of speech was an accurate reflection of his entire being. His words mirrored his thoughts and his deeds. His sentences were crisp and sparkling just as his movements were agile, nimble, and dexterous. Whether before students, colleagues or public his remarks were enlivened and refreshed by a perpetual merry humor and a sprightly wit sometimes barbed.

He possessed a distinctly creative mind and was constantly seeking the innermost causes of things which led him into the experimental laboratory where some of his

best work was done. He was also a craftsman of the highest order. His hands, beautiful and strong, were capable not only of the most delicate manual work, as instanced in the making of his bows and arrows and musical instruments, but he used them as well to carry out the most delicate surgical operations.

In the amphitheater he shone not only for his perfection of technique, but also for his mental quickness and his terseness of expression. He was therefore beloved by all his students, who swarmed to his clinics always sure of a certain mental stimulus which he radiated and for an epigrammatic method of expression which made what he said vivid and unforgettable. The faculty and the students of the University of California Medical School have suffered an irreparable loss, but will always retain a loving memory. He will be remembered as a man for himself. He always was himself, a sportsman in the finest sense of the word.

The love of out-of-doors was inherent in him and, while he has written of his more pretentious experiences, he was at his best in camp life surrounded by only a few friends and his family; singing and playing stringed instruments by the fire in the still night air, performing sleight-of-hand feats, entertaining with an unending fund of stories and experiences. Those who enjoyed such an outing with Saxton Pope will never forget it.

No appreciation of Saxton Pope would be complete without the tribute and recognition he would be the first to give, to his wife, Dr. Emma W. Pope. Her fine understanding and unselfish devotion reflected itself in his remarkable career.

Good-by Saxton, we will miss you—surgeon, sportsman, friend!

It is fortunate that we have from Doctor Pope's own pen a brief chronological record of the major events and achievements in his life. His many friends might like to preserve this record, which reads:

For generations our family has been medical in character, and I am the third in a succession of doctors.

My father was Col. B. H. Pope, surgeon in the United States Army. I was born at Fort Stockton, Texas, on September 4, 1875. My early years were spent in army garrisons with Indians, half-breeds, cowboys, and wild Americans for companions. Our sports were always riding, swimming, camping, fishing, shooting guns of all kinds, and hunting with the bow and arrow.

Herds of buffalo, antelope, prairie chickens, Sioux Indians, mustangs, desert travel, the clank of cavalry trappings, and the smell of army uniforms are among my earliest impressions.

My schooling was picked up haphazard in camps and frontier towns. In high school days I became a track athlete, specializing in the sprints and jumps. Later the inspiration of Otto Lilienthal and Professor Langley led me to take up aviation and to brave the dangers of gliding and primitive airplane flight.

In the year 1899 I graduated in medicine at the University of California, and after an intern year started country practice in the town of Watsonville, California. I had married a classmate, Dr. Emma Wightman, and here we raised a family of four children: Saxton Temple, Elizabeth, Virginia, and Willard Lee Pope. That Lee comes from my mother Sarah Lee Poston, who descended from the Lees of Virginia.

After twelve years of general country practice with a good proportion of surgery, I moved to San Francisco and was appointed instructor in surgery in the Medical School, University of California. From this position I have been advanced to assistant professor, then to associate clinical professor of surgery in the past twelve years.

My interests have been in surgical research, blood transfusion, plastic surgery, abdominal surgery and chest surgery, teaching all these branches in turn.

During the war I was detailed the intensive instruction of hospital units in the treatment of shock and transfusions, my cannular system having been extensively



employed both by American and British surgeons on the front.

In these years I was also active in medical organization, serving on innumerable committees; was successively secretary of my county society, secretary of the Academy of Medicine, president of the San Francisco County Medical Society, a director of the League for the Conservation of Public Health. I also served three years as chief surgeon of the San Francisco Emergency hospitals and as secretary of the California Medical Association.

I have written and published some thirty-two alleged scientific papers on subjects ranging from peritoneal adhesions, perforating gastric and duodenal ulcers, to intra-tracheal insufflation anesthesia.

In the year 1912 I became interested in a California Indian, salvaged from the wreck of his tribe, Ishi, the Yana, who was wholly uncivilized, and from him learned again to shoot the bow and arrow as the aborigines did before Columbus landed.

He taught me to make archery tackle, and we hunted in the wilds together as his forefathers had done for centuries. Ishi died of civilization and went to the land of the shadows.

Those he inspired to shoot the bow remained and hunted with the long bow, as did Robin Hood of Merrie Old England. For more than ten years a few of us out West have taken up this honorable weapon of our ancestors as a more sportsmanlike implement than a gun with which to slay wild game. We have shot rabbits, squirrels, quail, grouse, duck, geese, wild cats, foxes, coons, skunks, coyotes, deer, black and brown bears, panthers and grizzlies, moose, elk, mountain sheep, Kadiac bears, and everything but man. All of this has been in the wooded mountains of California, Arizona, Wyoming, Oregon, and Alaska.

We have shot running deer at seventy-five yards, and we have missed standing bucks at twenty-five yards. But in all we have had the thrill and romance of the green woods, men armed with the most perfect weapon of the chase, the ancient yew bow and the barbed arrow.

Our bows are nearly six feet in length and pull about eighty pounds. They can shoot a light arrow 300 yards. Our hunting shafts are made of birch twenty-eight inches long, feathered with three turkey pinions, tipped with steel blades three inches in length and sharp as daggers. We can drive them clean through a deer at 100 yards. All this equipment we make ourselves.

In the year 1925 Arthur Young, my archery companion of many hunting expeditions, and I went to Africa to try our hand on big game. We were accompanied by Stewart Edward White, the writer. On a five months' safari in Tanganyika we shot with our bows most of the wild game species of that country, including Thompson gazelles, reed buck, water buck, wildebeest, kongoni, eland, jackals, hyenas, and smaller game.

Besides these we attacked and slew entirely with our bows and arrows five African lions. Several of these were killed in less than a minute after being hit, and our largest and best trophy was shot by Arthur Young and killed with one arrow in less than fifteen seconds.

This in brief is an outline of our adventures. They are detailed in full in two books I have written, "Hunting with the Bow and Arrow," which tells how to make and shoot archery tackle, as well as of our American exploits; and "The Adventurous Bowman," a recount of our African experiences, both published by Putnam's Sons, New York.

The following monographs in "American Archaeology and Ethnology," publications of the University of California Press, Berkeley, California, resulted from my association with Ishi:

"Ishi Archery," "The Medical History of Ishi," and a "Study of Bows and Arrows."

*Saxton Pope*

## FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, names and addresses of executive officers of coming meetings for insertion in this directory.

**American Medical Association**, Washington, D. C., May 16-20, 1927. Olin West, Chicago, Secretary and General Manager.

**California Medical Association**, Los Angeles, April 25-28, 1927. Emma W. Pope, Balboa Building, Secretary.

**Nevada Medical Association**, Reno, Nevada, September 24-25. Horace J. Brown, Reno, Secretary.

**Utah Medical Association**, Salt Lake City, ——. Frank B. Steele, Salt Lake City, Secretary.

**Pacific Coast Surgical Association**, Del Monte, February, 1927. Edgar L. Gilcreest, San Francisco, Secretary.

**Pacific Northwest Medical Association**, ——. Frederick Epplen, Spokane, Secretary.

**Pacific Coast Oto-Ophthalmological Society**, San Francisco, ——. Kaspar Pischel, San Francisco, President.

**Northern California Medical Association**, Woodland, ——. John D. Lawson, Woodland, Secretary.

**California Association of Physiotherapists**, Los Angeles, April 25-28, 1927. Miss Mabel Penfield, 560 Sutter Street, San Francisco, Secretary.

**Southern California Medical Association**, Los Angeles, ——. C. T. Sturgeon, 1136 West Sixth Street, Los Angeles, Secretary.

**California Association of Medical Social Workers**, Los Angeles, April 25-28, 1927. Mrs. Sophie Mersing, Mount Zion Hospital, San Francisco, Secretary.

**Medical Women's National Association**, Washington, D. C., ——. Maud Parker, Medical and Dental Building, Seattle, Washington, Secretary.

**California State Nurses' Association**, ——. Mrs. J. T. Taylor, 74 New Montgomery Street, San Francisco, Secretary.

**American Association for the Advancement of Science**, Pacific Division, ——. W. W. Sargent, Secretary.

**American College of Surgeons, Clinical Congress**, Montreal, October 25-29, 1926. Franklin H. Martin, Chicago, Director-General.

**Retention of Vegetable Material in Stomach**—In the case here presented by Lloyd Bryan (San Francisco (Jour. A. M. A.)), the retained matter was composed of celery fibers, prune and raisin skins, and other cellulose material which could not be identified. The mass was soft and loose and had to be removed with a spoon and by sponges on a sponge stick. The patient was a man, aged 55, a native of India. The past history was uneventful so far as concerned the present illness. Up to three years before, the patient had been very well. About that time he began to feel some abdominal distress, at first after meals and later constantly. It was characterized by a feeling of fullness and lightness, relieved somewhat by belching. There was occasional vomiting. At the same time there was a dull pain in the epigastrium and across the abdomen, but not referred to the back or shoulder. The stools had always been formed and never tarry or clay colored. He had had diarrhea at times, sometimes six or eight stools in a day. He had never been jaundiced. The conclusion from the roentgen-ray examination was: retained foreign material in the stomach. At operation, aside from the retained vegetable material in the stomach, no lesion was found. The pylorus was smooth and wide, admitting two fingers readily. Three months after the operation the roentgenogram of the stomach was normal and there was no six-hour gastric residue. This case is of particular interest on account of the fact that the patient was diabetic. The blood sugar (fasting) was 301 mg. per hundred cubic centimeters of blood.

I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.—Isaac Newton.

Much nervousness in children is a direct result of parental influence, though such sources are often disregarded.—Edward E. Mayer, Hygeia, August.

## UTAH STATE MEDICAL ASSOCIATION

E. H. SMITH, M. D., Ogden.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GIESY, M. D., *Salt Lake*  
*Associate Editor for Utah*

### WE AND OUR PATIENTS

Years ago the professions of medicine—such as it was—and religion were combined in the person of the priest. And there is a good deal of the atmosphere of the priesthood still surrounding the medical art. Or there should be, which is the point we are driving at.

The doctor, even more than the priest, stands and officiates at both the beginning and the end of life. He is the gatekeeper, as it were, of those portals through which the young life emerges. And with no sense of an improper levity we may say that equally he is the keeper of those darker doors through which that same life goes out.

These facts remain unaltered, no matter how much or how little our craft may become commercialized. Remains, too, the rôle of the doctor, as of the priest, in those times of stress and endurance which mark the way between the rosy portals of life's morning or the dusky exits of life's night.

As with the priest, there is a something sacred in the intimate services the doctor renders—services outside all conventional considerations, even more intimate than any of the priest. Business is business of course. And even the doctor must live. But how much better to live with our patients than on them; to be to them friend, counselor, and healer than to be merely a paid intelligence. And there is a double advantage to both doctor and patient in the former state, a resulting intimate knowledge that helps the doctor aid when aid is needed; helps the patient to obtain the needed aid.

One goes so much better to a friend than a stranger when one needs either physical or mental help. And if the patient is an old one (one known, say from childhood or for years) how much better the doctor knows the personal idiosyncrasies both mental and physical of that patient, and how much easier may he fit them to the present issue than a stranger might. For in this is the stranger handicapped, that he must learn in a few hours or days what the older acquaintance has given to the acquaintanceship of years.

A machine may do wonderful work when properly devised and set up. But aside from its routine mathematical efficiency the machine has no intelligence. And there is a psychology of healing which is quite as essential as drugs. That psychology is the psychology of confidence. And that confidence is a thing built very greatly on just two things: personal knowledge and results. As a matter of fact, given a reasonable ability on the part of the doctor, the former will certainly militate greatly toward the latter. It is so much easier to treat a patient who

comes to us convinced of the fact that in us he shall find help.

And so this is a plea for a greater cultivation of the personal equation in practice, for a cultivation of friendship between those we seek to serve in a professional capacity and ourselves. We believe that such a universal attitude on the part of the physicians would insure better results. There is a certain pathos in the utter trust of the man or woman or child who gives implicit faith to the one to whom they look for help. There is a certain glory in the crown of works of the man who, accepting that trust, goes on and merits that faith. It is these things that make the beauty of the healing art. Such a man walks godlike on the earth. It is said that the doctor's smile is a sad smile. And why not? Does he not see the touching things of life? A baby is born into your hands; and is there not a tug at the heart-strings if later that same baby comes to you and puts herself into your hands for the ordeal of her first experience of motherhood? A woman gives life into your hands, and later you close her eyes in death. Is there not a certain glory in even that sad service, so long as you know you have done your part and that, even in death, she has remained the friend of your life?

Nay, not all the commercialism in the world, the frantic chase for dollars, the organization or the officialization of medical practice, can take the human glory out of the doctor's life or rob it of the priestly element with which it is endowed.

And so we say, let us get closer to our patients; let us make of them not only clients, but friends; let us deserve their confidence, their trust, their love. Yea, love. For the physician may actually come to stand to them in the light of a father; and from them if he like he may win the trusting love of a child. In this we feel was the real spirit of the oath of Hippocrates.

### THIS PHYSICAL THERAPY STUFF

A recent check-up is said to show that some hundred thousand physicians in the United States are using some form of physical therapy, which has lately come to mean largely electrotherapy, in their practice at the present time. This is a wonderful spread of a thing which some six years ago was very little mentioned.

True, Finsen in Denmark, the London General and St. Bartholomew's hospitals in England, and the Rollier clinic in Switzerland had been using more than one form of electrical medicine for many years. They had shown results of a gratifying nature. And on this side we had the x-ray well established, and radium of course.

But recently the thing has spread like a forest fire. Hospitals have equipped themselves with galvanic, static, high frequency, and actinic ray equipment. Practitioners have set up the apparatus in their offices to an amazing extent. The American Electrotherapeutic Association organized thirty years ago has had an influx of new blood gratifying to the pioneers of the subject, such as Massey of Philadelphia, Pope of Louisville, Morse of Boston, and others who have been doing consistent



work along this line for all those years. The American College of Physical Therapy has been organized in the western area of the United States. In October they will hold their convention at Chicago, with a program of papers, round-table discussions, and clinical instruction. This will be attended by men from not only the entire group of states, but by men from Europe as well.

These are facts, but like straws they seem to show which way the wind is blowing. And they seem too the sum total of growing experience. And that sum total—that residuum of growing usage—seems to be that, in the so-called physical therapy, medicine has added to itself a fresh means of attack which is capable of giving gratifying results in the treatment of many diseases. The leaders in this new field are men of knowledge, ethical men of experience, not to be easily persuaded, fooled or gulled. They are men who will value a thing only on the standard of results. Physical therapy therefore is, in the light of their approval and use, no chimera of the electrical manufacturer or a brain-child of the cults. It is now, and becoming ever more so, a thing which purely because of its merits is coming to speak for itself.

The outstanding event of August, insofar as the Utah Association was concerned, was quite naturally the postgraduate program arranged by the committee in charge and held August 23 to 27, inclusive, in Salt Lake.

To those who attended we feel sure that those were four valuable and well-spent days.

Such a program as that presented after no small effort upon the part of the committee, of which Doctor Roberts was chairman, can scarcely fail to stimulate fresh interest in the mind of the physician who is fortunate enough to participate.

Were there any criticism we could offer we would say that the program was only to be criticized in the single fact that it was all too short. Like *Oliver Twist*, we would have liked "more," after the excellence of what we received had whetted our appetite.

It is gratifying in the extreme to know that students having completed the two-year course in the Medical School of the University of Utah will be accepted by eight different four-year schools this fall. Laville Merrill will go to the University of Illinois. Milton P. Ream, William Abbott, Otto E. Gray, and Wendell S. Keate will attend the University of Chicago. Phillip Jeppson, Russel Clark, and Harold Snow have selected the Northwestern. Pennsylvania University will accept Reed Harrow, Claudius Gates, Courtney Weggeland, and Grant Y. Anderson. Elliott Snow and LeRoy Wirthlin will go to Harvard. Phillip Strowbridge will attend the University of California, and Burton Powell will go to Jefferson, while Alma Reese, Jr., will attend the Washington University at St. Louis.

In the meanwhile twenty-eight students have already been accepted at the university for the two-year course, beginning this fall. This is all very pleasing to Dean Ralph O. Porter, who has worked hard and faithfully to build up the school. As a matter of fact nearly twice as many applications were made for the next semester as could be accepted upon the basis of numerical limitation, which speaks very highly for the work Dean Porter and his associates have accomplished during the past few years.

Dr. John A. V. Davies, assistant resident physician at Yale University Hospital, who is the son of the Rev. and Mrs. George E. Davies of Salt Lake, has accepted a position under the Rockefeller Foundation for research work, and will assume his duties in New York in the early fall.

## NEVADA STATE MEDICAL ASSOCIATION

A. J. HOOD, M. D., Elko.....President  
HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

### TWENTY-THIRD ANNUAL MEETING

The twenty-third annual meeting of the Nevada Medical Association will be held at Bowers Mansion, Nevada, September 24 and 25, 1926. Headquarters, Hotel Golden, Reno.

Officers—Arthur J. Hood, Elko, President; W. L. Samuels, Reno, First Vice-President; C. W. West, Reno, Second Vice-President; Horace J. Brown, Reno, Secretary-Treasurer, A. P. Lewis, Reno, George F. Pope, Winnemucca, and W. A. Shaw, Elko, Trustees.

Council—G. L. Dempsey, Fallon; W. L. Howell, Gardnerville; J. C. Cherry, Goldfield; C. E. Sweezy, Winnemucca; J. H. Hastings, Pioche; D. A. Smith, Mina; W. J. Circe, Carson City; W. H. Riley, Gold Hill; C. E. Bullette, Las Vegas; J. R. Eby, Elko; W. H. Brennen, Eureka; G. L. Belanger, Austin; J. T. Rees, Yerington; P. D. McLeod, Tonopah; F. M. West, Lovelock; H. L. Dalby, Sparks; M. J. Rand, Ely.

#### Committees

Membership—Beaumont Brown, A. C. Olmsted, Hal L. Hewetson.

Judicial—M. A. Robison, E. E. Hamer, R. A. Bowdle, R. R. Craig, W. H. Brennen.

Scientific Work and Program—V. A. Muller, C. W. West, H. A. Paradise.

Necrology—J. E. Worden, Mary H. Fulstone, D. L. Shaw.

Entertainment—S. K. Morrison, W. L. Samuels, A. J. Hood, Reno.

Public Health and Education—Henry Albert, W. A. Shaw, M. R. Walker.

Diseases of Eye—Anna B. De Chene, John A. Fuller, John T. Rees.

Military Affairs—The President, Vice-Presidents, and Secretary.

Delegate to A. M. A.—C. E. Piersall. Alternate, W. M. Edwards.

#### Program

Friday, 9 a. m.

Arthur J. Hood—President's Address.

1. J. Edward Harbinson, Woodland, California—Joint Pains and Uric Acid Diathesis.

Discussion opened by A. Huffaker, C. H. Lehnars, E. H. Falconer.

2. Miley B. Wesson, San Francisco—Treatment of Malignant Tumors of the Testicles and Scrotum.

Discussion opened by Byron H. Caples, Horace J. Brown, M. Hinman.

3. E. L. Creveling, Reno—Toxic Amblyopia.

Discussion opened by J. A. Fuller, Charles C. Blake, J. L. Robinson, D. L. Shaw.

4. James T. Watkins, San Francisco—Subject to be announced.

Discussion opened by Donald MacLean, R. A. Bowdle, W. M. Edwards.

5. Ernest H. Falconer, San Francisco—Blood Transfusions in Pernicious Anemia.

Discussion opened by C. W. West, W. H. Hood, H. A. Paradise.

6. Philip King Brown and Leo Eloesser, San Francisco—Symposium on Lung Compression and Surgery.

Discussion opened by T. W. Bath, W. A. Shaw, E. L. Gilcreest.

7. Ludwig A. Emge, San Francisco—The Menopause and Its Treatment.

Discussion opened by Alex McIntyre, H. Lisser, James F. Percy.

8. Alexius Forster, Colorado Springs—Subject to be announced.

Discussion opened by S. K. Morrison, H. L. Hewetson, W. L. Samuels.

9. Howard E. Ruggles, San Francisco—Cholecystography.



A. J. Hood  
President Nevada Medical Association

Discussion opened by C. E. Piersall, W. N. Kingsbury, B. Brown.

10. Clain Fanning Gelston, San Francisco—Certain Acute and Chronic Upper Respiratory Tract Infections in Children.

Discussion opened by John Tees, Mary H. Fulstone, George F. Pope.

11. E. L. Gilcreest, San Francisco—A Study of Fractures in and About the Ankle Joint. Illustrated.

Discussion opened by W. H. Riley, A. L. Stadtherr, A. R. DaCosta.

#### BUSINESS MEETING

Friday, September 24, 1926, 8 p. m.

Y. M. C. A., Reno

Registration and payment of dues.

Reading of minutes of last annual meeting.

Report of delegate to A. M. A.

Reports of various committees.

Election of officers.

Officers to be elected: A president, two vice-presidents, secretary-treasurer, two trustees for three years—one for one year, and one for three years.

Saturday, September 25, 1926, 9 a. m.

Bowers Mansion

1. George Warren Pierce, San Francisco—Advances in Plastic Surgery. Illustrated.

Discussion opened by D. A. Turner, George R. Magee, W. L. Howell.

2. John Tees, Reno—Lactic Acid Milk in Infant Feeding.

Discussion opened by E. E. Hamer, C. E. Secor, A. Huffaker, C. F. Gelston.

3. Henry Albert, Reno—Hay Fever in Nevada.

Discussion opened by A. F. Adams, C. E. Bullette, M. R. Walker.

4. James F. Percy, Los Angeles—The Cautery Treatment of Carcinoma Above the Clavicle.

Discussion opened by W. W. Washburn, E. L. Gilcreest, Donald MacLean, L. A. Emge.

5. Howard C. Naffziger, San Francisco—The Treatment of Spinal Cord Injuries.

Discussion opened by Leo Eloesser, H. L. Hewetson, P. D. McLeod.

6. W. W. Washburn, San Francisco—Surgical Lesions of the Abdomen—Some Diagnostic Problems.

Discussion opened by S. M. Sproat, R. R. Craig, T. W. Bath.



HORACE J. BROWN  
Secretary Nevada Medical Association, and  
Associate Editor for Nevada

7. Frank Hinman, San Francisco—Subject to be announced.

Discussion opened by Byron H. Caples, M. B. Wesson.

8. H. Lisser, Berkeley—The Influence of the Thyroid, Pituitary and Adrenal Glands on the Functions of the Ovary. Illustrated.

Discussion opened by E. H. Falconer, J. E. Harbinson, S. K. Morrison, P. K. Brown.

Luncheon will be served Friday and Saturday at the Mansion. There will be a formal banquet at the Hotel Golden, Reno, at 9 p. m., Saturday. Full details will be announced at the first session.

**Suggestions to Those Contributing Papers**—Fifteen minutes is the maximum time allowed to essayists, except invited guests. Discussion will be limited to five minutes for each speaker, and no speaker may be heard twice on the same subject without unanimous consent. It will be necessary to strictly enforce these rules because of the length of the program.

Meetings will be called to order promptly at the hour designated.

Each essayist will please deposit his paper with the secretary so that it may be offered for publication in our official journal.

Please bring this program with you.

**Changes in Membership**—W. J. Van Denberg has gone to New York for postgraduate work, and expects to locate in California upon his return about January 1. Doctor Harrison has located in Minden.

Charles C. Blake has moved from Reno to Burlingame, California, where he is specializing in diseases of the eye, ear, nose, and throat.

Beaumont Brown has moved from Yerington to Sacramento, California.

**Every experimental scientist is a kind of explorer or prospector.** He spends his energy pushing his way here and there into the darkness of the unknown, blazing trails which may or may not lead to scientific treasure.—Prof. Raymond Dodge, Scientific Monthly, August, 1926.

**The study of prevention by the chiropractors seems unnecessary,** in view of the fact that their false conception of the practice of medicine rather precludes the truth with which medicine is pregnant.—Medical Herald.



## MEDICAL AND HEALTH AGENCY NEWS

His appointment as editor of *Better Health Magazine* gives Philip King Brown an opportunity to render a useful but extremely difficult service to the people of California.

Osler once said, "The phenomenal strides in every branch of scientific medicine have tended to overload it with detail. To winnow the wheat from the chaff and to prepare it in an easily digested shape for the tender stomachs of first- and second-year students taxes the resources of the most capable teacher." Quite true, but such a teacher's problem is simple compared with that of an editor who must pick, choose and prepare medical knowledge in an easily digested shape for the stomachs of Americans—stomachs already upset from overfeeding with indigestible and even poisoned material.

Doctor Brown comes to his new work well prepared, and we welcome him to the cult of the editors.

The Women Physicians' Club of San Francisco gave a farewell dinner at the Clift Hotel, July 29, for Dr. Adelaide Brown, who sails shortly for a trip around the world. Dr. Ina Richter, who is also going abroad, was included in the farewell. Dr. Louise B. Deal presided, and Dr. Eva C. Reid acted as toastmistress. Music was rendered by Dr. Frieda Kruse, soloist, and Dr. Elizabeth Davis, pianist. The speakers, Drs. Mary Glover, Emma Willits, Dunlop Strickler, and Ellen Stadtmuller emphasized the splendid work Doctor Brown has done as a general practitioner of medicine, a member of the State Board of Health, and as an indefatigable worker in the interests of public health in California and the United States. They also voiced their appreciation of her sympathetic and helpful interest in the younger members of the profession.

In her reply Doctor Brown spoke of the social service aspect of medical work which is inseparable from the viewpoint of every woman physician, and called the attention of the club members to their duty as outlined in the constitution of the club, namely, to promote a spirit of fraternity among women physicians, and to work in an organized manner for civic betterment and the improvement of public health.

A recent number of the "California Lutheran Hospital Messenger," issued by the New California Lutheran Hospital of Los Angeles, is largely made up of the annual reports of officers and committees. This magnificent new ten-story hospital will do much to relieve hospital congestion that has been disturbing doctors and other citizens of southern California for some years.

In spite of the difficulties encountered in replacing an old building unit by unit, the hospital served 4084 patients—51,012 days—during the year, at an average cost per day of \$6.66.

Their announcement will be found regularly in our advertising pages hereafter.

The American Board of Otolaryngology held an examination in San Francisco on April 27, at which fifty-five candidates appeared. Of this number 51 passed, 3 required additional case reports, and 1 failed.

Philip A. Shaffer, professor of physiological and biological chemistry, Washington University, has been secured to give the 1927 (January or February) annual medical lectures for San Diego physicians. This form of graduate instruction, approved by the Council of the County Medical Society, and promoted by David R. Higbee, chairman of the committee, was inaugurated this year and proved to be highly successful. The 1927 lectures should have, and doubtless will have, the support and co-operation of all physicians interested in promoting the cause of better medicine.

Only teachers and investigators can keep up with the

amazing progress in biochemistry, and what an opportunity to have this vast literature sifted for us so that we all may adopt some of the applicable facts in our service to the sick.

The exact dates and subjects of Doctor Shaffer's lectures will be announced later.

Saint Joseph's Hospital Staff, San Francisco, considered "Neuroses Following Injury" and "Results with Mercurochrome" at the last meeting which was held in the new Nurses' Home, A. S. Musante presiding.

Joseph Catton discussed the development of the neuroses following injury. He indicated the differing psychological factors at work in a patient, e. g., with a Colles fracture: (a) with no liability factors involved; and (b) with either industrial or personal liability relations. The necessity of the sometimes very difficult differentiation of the neurosis from real organic disease on the one hand and malingering on the other was gone into. Catton pointed out that while all neuroses are functional nervous affections, they may arise from disturbed psychology or disturbed physiology. He indicated the psychological methods of dealing with psychogenic neuroses, i. e., hysteria, neurasthenia, anxiety states, etc.; but showed the inadequacy of psychotherapy for the spasms, weakness, vasomotor, and other symptoms of the psychopathic neuroses.

William Quinn reported medical and surgical cases treated with mercurochrome with results that were quite uniformly beneficial. Roy Parkinson spoke of the value of this drug in iritis and phlyctenular conjunctivitis. C. O. Southard and Ethan Smith added their experiences in head and orthopedic cases, the latter advising caution and accurate conclusions.

The program for September 8 follows: "Medical Observations from the East," Roy Morris, and "Advance of Obstetrical Surgery," Ludwig Emge.

The American College of Physical Therapy will hold a clinical congress on physical therapy during the week of October 18 to 23, 1926, at the Drake Hotel, Chicago. The first two days of the meeting will be devoted exclusively to instruction classes. The remainder of the week will be given over to addresses, demonstration clinics, surgical clinics, and other special features. Physicians desiring to attend the instruction classes will kindly register at once with Dr. A. R. Hollander, chairman Program Committee, 30 North Michigan Avenue, Chicago, Illinois. A fee of \$15 will be charged for the instruction work which includes registration to the regular congress sessions.

The Interstate Postgraduate Assembly of North America will be held in Cleveland, Ohio, October 18, 19, 20, 21, and 22. An extensive program of clinics, addresses and social pleasures will be carried out. Further information may be had from Dr. William B. Peck, managing director, Freeport, Illinois.

A large chiropractic advertisement in the "Santa Ana (Calif.) Mirror," July 16, 1926, defines vaccination as "the inoculation of a healthy person with the putrid pus taken from a festering sore on a diseased animal of a distinct syphilitic character."

The Fifty-fifth Annual Meeting of the American Public Health Association will be held in Buffalo, New York, October 11-14, with the Hotel Statler as headquarters.

The program promises to furnish stimulating discussions of moot questions and the first announcement of several new investigations and studies.

There will be special sessions on mental hygiene, teaching of health in colleges, and two full half-days will be devoted to the subject of providing a safe milk supply. The program this year will be an unusually large one, thirty-five sessions having been scheduled.

Three additional hospitals acceptably conducted as legitimate medical agencies begin with this issue to

carry their announcements in the advertising pages of CALIFORNIA AND WESTERN MEDICINE. They are:

The Chinese Hospital of San Francisco is one of the most modern and best of its kind to be found anywhere. In line with Chinese progressive leadership on the west coast, this hospital has conformed from its conception to the spirit of medical progress so sanely outlined and supported by the Council on Medical Education and Hospitals of the American Medical Association and by medical organizations everywhere.

The California Lutheran Hospital of Los Angeles, although an old and well-established hospital, in extensive additions to the physical plant and extensive reorganization and modernization of its policies and methods, has become a leading force for better medicine in the southern part of this state. Although the past year was largely devoted to extensive reconstruction, some idea of the character and volume of the work performed may be seen by a brief analysis of the annual report which appears elsewhere in this issue.

Joslin's Sanatorium, Lincoln, California, for the care of nervous and mental diseases and the aged and infirm, is conceived and is being conducted to meet the increased demands for better service to these people now so widely recognized everywhere as needing special care. This sanatorium recognizes, however, that good hospitals are legitimate medical agencies and that to render their best service they must co-operate with ethical, educated doctors of medicine.

## NEWS ITEMS FROM CALIFORNIA BOARD OF MEDICAL EXAMINERS

By CHARLES B. PINKHAM, M. D., *Secretary*

The attention of the Board of Medical Examiners was recently called to a diploma reported issued by the White Institute of Science to Herbert E. Young, asserted persistent violator of the Medical Practice Act in San Bernardino County, said diploma alleging to create Herbert E. Young a doctor of psychotherapy. The records of the Secretary of State show that the "White Institute of Science" was incorporated in 1923, No. 102,473, its purpose being manifold, running the gamut from the manufacture of novelties, perfumes, the carrying on of private and correspondence schools of metaphysical and similar therapeutics, the issuing of suitable diplomas, and in fact covering every conceivable purpose in all quarters of the globe, particular interest lying in the fact that the articles permit the acquiring and disposition of *fishing permits* and privileges. This is one of the many corporations created under the laws of the state of California and authorized to issue various degrees without any discoverable physical equipment or teaching personnel.

According to the "San Francisco Chronicle" of July 6, 1926, the members of the Bay Chapter of the "American Medical Liberty League" were called to a meeting for the purpose of discussing the "Why of Medical Freedom," and announcing a program of active work. "The meeting will be presided over by Antonio P. Entenza, local attorney, and the principal speakers will be Walter Thomas Mills of Berkeley, Professor Maizain of Oakland, and Annie Riley Hale, Pacific Coast organizer of the League."

According to the "Los Angeles Examiner" of July 23, 1926, Dr. Walter R. Anderson, Hollywood physician, charged with attacking Gloria Delmar, 18-year-old actress, was held for trial in the Superior Court of Los Angeles, his bond being fixed at \$15,000.

"Dr." W. A. Bach (Gersabeck), a persistent violator of the Medical Practice Act, was recently found guilty in Riverside and sentenced to a term of six months in the road camp prison. Bach's specialty is alleged to be opening sanitariums and inducing people of small means to invest under promise of employment in various clerical capacities. "Another scheme is to get a patient into the sanitarium, obtaining as much money as possible in advance, and later getting in touch with some member of

the patient's family with an exaggerated story of the patient's condition, thus obtaining large sums."

According to newspaper reports, Elna B. Bare, a licensee of the Board of Osteopathic Examiners, is being sought by the Los Angeles police in connection with a sack of human bones found in the garage of a house he formerly rented at 1406 West Sixty-eighth Street, Los Angeles.

The "San Francisco Bulletin" of July 6, 1926, relates that a visiting official from Chicago is urging California to enact a law for the regulation of beauty parlor practitioners, further stating "the laws against practicing medicine and surgery without a license should be sufficient to protect the public against beauty specialists that go beyond their limitations in desperate cases or for big fees."

"Lillian Murphy, 26, sought beauty by a face-lifting operation; she found death instead." A coroner's jury returned a verdict to this effect and exonerated Dr. David Gustason, who performed the operation. The jury found that the deceased came to her death from lung hemorrhages "following lesions on forehead and sides of the face from a surgical operation."

The State Board of Chiropractic Examiners won its first legal tilt yesterday in its attempts to abate the Berkeley Chiropractic College and Berkeley Chiropractic High School operated by Dr. Percy Purviance (San Francisco Examiner, July 24, 1926). Previous reference appeared in "News Items," December, 1925, and July, 1926.

Recent press dispatches relate that four chiropractors, namely, "Charles Brockman, Berkeley, Cecile Zucklin, and Charles H. Wood of Los Angeles, all charged with fraud in obtaining license, and Fred J. Oakes, San Francisco, charged with performing an illegal operation," have been summoned before the State Board of Chiropractic Examiners to show cause why their license should not be revoked.

According to the "Burbank Pathfinder," July 5, 1926, Dr. F. L. Burleigh pleaded guilty to a charge of reckless driving of his automobile, and the court assessed the minimum fine of \$25 against the defendant.

Dr. Sterling Bunnell, who for some time has been an enthusiastic aviator, was seriously injured recently in an airplane crash in the Yosemite Valley.

Chiropractors, whether licensed to practice by the State Medical Board or the State Chiropractic Board would pay the same license tax to the city under an ordinance which the supervisors passed yesterday. Hitherto, only chiropractors licensed by the Medical Board have been given licenses by the city. Creation of the Chiropractic Board and admission of a number of persons to practice at its hands made it necessary to change the terms of the city license ordinance so that the tax could be collected from those as well as from the chiropractors licensed before the Chiropractic Board was created.—San Francisco Examiner, June 22, 1926.

"Bishop Wilbert Leroy Cospers, self-styled "apostle of the Divine Chemist," has issued invitations to his disciples to his "resurrection" tomorrow. The event might be more aptly termed a coming-out party, however, for it will signalize the "bishop's" release from the Contra Costa jail at Martinez. . . . He was sent to jail from Oakland seventy-five days ago on a medical practice charge. . . . Cospers' incarceration followed the interruption of one of his "clinics" at the home of Mrs. Otto Dietrich in Richmond. An addition to the family was expected at the Dietrich home, and Cospers and his disciples gathered there to pray for the health of the mother and child. The proceedings were said to be rather weird, and when Mr. Dietrich returned home at their height he ejected the participants and invited the police to take action. Leaders of the Christian Philosophical Institute, which went bankrupt coincident with its "bishop's" conviction, announced that they are making plans for a day of general rejoicing to mark the return of their leader. It is understood that boxing bouts, aesthetic dancing, and choral singing are scheduled on the program. . . . Cospers' fellow-prisoners at Martinez are already mourning his prospective departure because he has distinguished himself there, not in the rôle of spiritual adviser, but as jail cook (San Francisco Examiner, July 9, 1926). Pre-



vious entries appeared in "News Items" of March, May, and June, 1926.

Attention of the Board of Medical Examiners has recently been called to the renewed activities of the "David College of Neuropathy" founded in Los Angeles some years ago by A. P. Davis, M.D., who died in 1919. According to the diploma of this institution under the title of "neuropathy" is embraced "The Science of Chiropractic, Osteopathy, Suggestive Therapeutics, Ophthalmology." The diploma is signed "J. H. Reardon, D. C., N. D., S. T., president; W. Grant Hess, D. C., F. N., T. D., vice-president; Irene J. Reardon, secretary." The name W. Grant Hess appears in the articles of incorporation of the Chirothesian Church of Faith, previously referred to in "News Items" for December, 1925, and July, 1926, he having failed to qualify for a drugless practitioner's certificate under the medical act, but is the holder of a certificate to practice chiropractic.

According to the "Los Angeles Record" of July 22, 1926, Madam De Lesle, who says she is a face specialist and who was arrested yesterday on a charge of practicing medicine without a license, obtained a continuance of her case before Municipal Judge George Bullock when her case was called for hearing. Report filed with the Board of Medical Examiners relates: "Madame De Lesle, whose real name is said to be Jean Ferguson, formerly an actress, is one of the large flock of 'beauty doctors' that infest Los Angeles and prey upon the vain but homely woman. Her system of treatment is similar to that of most beauty doctors who give the face peel. A solution of carbollic acid is first applied, then the area treated is covered with adhesive plaster which is left on for twenty-four or forty-eight hours. According to some of her patients, when the adhesive plaster is finally pulled off, pus flows quite freely, one patient stating that she had to put a towel around her neck to prevent the pus running down. . . . One of her patients who called at our office had to use a strip of adhesive tape to hold up her lower eyelids, as they dropped after the treatment, and tears ran continuously." It is related that her advertisement in the "Los Angeles Examiner" of June 6, 1926, read in part as follows: "I am familiar with every treatment known to science, and no matter where you go or what you spend, you will never get anything superior to what I have to offer."

Investigation was recently made of A. Abbey Godden, Santa Monica, who "claims to be a graduate of Fletcher Little's Physiotherapy School, 32 Hollis Street, London, England," coming here from Canada where he lectured or demonstrated to the nurses at the General Hospital, Calgary, Alberta.

A citation has been issued calling David (Oscar) Franklin before the Board of Medical Examiners at the October, 1926, meeting to show cause why his license, alleged to have been fraudulently obtained, should not be revoked. Oscar Franklin is alleged to have practiced on the credentials of David Franklin, who died in New York in 1903.

Dr. J. G. Ham, mentioned in "News Items" of May and August as having been indicted following the death of Bessie A. McCarroll, "today found himself a free man," Judge Keetch of Los Angeles having dismissed the charge. "Evidence, it was said, was insufficient to warrant trial."—Los Angeles Record, June 29, 1926.

An individual giving the name of J. C. Hartford, M.D., was recently investigated at San Diego in connection with complaints made by girls alleged to have been employed by him in his sixteen-bed maternity hospital at Palm City, which hospital, it is asserted, does not exist. It is related that Hartford gave the number of his narcotic registration as 2458, which is the same number as issued to Dr. W. Tarleton, 234 Spring Street, Los Angeles, licensed as a physician and surgeon in this state in 1914 whose present whereabouts is unknown. The name J. C. Hartford does not appear in the list of licensed physicians and surgeons in North America.

Press dispatches relate that Dr. F. S. Haynes of South Pasadena was recently charged with violation of the state chiropractic law and fined \$100, \$50 of which was suspended on his explanation that he intended to apply for a legal license to practice to the Board of Chiropractic Examiners.

H. M. Hoxey, head of the "National Cancer Research

Institute," Taylorsville, Illinois, was ordered arrested on complaint of the State Board of Registration and Education, according to the "San Francisco Examiner" of July 25, 1926, which printed an article headed "Cancer Cure Probed as Twenty Patients Die." The article further relates that the white powder known as hoxide, according to recent analysis, is reported to contain a large percentage of arsenic, it being "found that the powder not only would not cure cancer, but was of a nature to eat its way through the tissues of anyone taking it, finding its way into the blood stream and eventually causing death by hemorrhage."

According to reports from the Federal Prohibition Administrator, Southern District, the liquor permits of some twenty-five physicians in the Southern District were recently revoked, based upon alleged irregularities.

Unable to agree, the jury in the case of George M. Johnson (Stockton druggist) tried on a charge of practicing medicine without a license, disagreed and was discharged (San Francisco Examiner, July 18, 1926). "News Items," February, 1926, relate a previous charge.

P. Stewart Kidd, recently investigated in connection with his advertising of a guaranteed cure for cancer, related that the cancer cure formula was in possession of Mrs. S. J. Gore, of the Gore Publishing Co., Ruskin, Florida, and that Kidd "believing that a 'guaranteed' cancer cure was worth millions conceived the idea of charging patients \$5 to inform them where they could obtain the guaranteed cure."

According to reports, M. T. Larkin, Chirothesian, was on August 2, 1926, found guilty of violation of the Medical Practice Act in San Diego, and has applied for probation. "Our star witness disappeared before the trial, rather than testify to the peculiar methods of treatment she received from the defendant." Further items appear in "News Items" of December, 1925, and July, 1926.

"Armed with a certificate issued by the Spiritual Healers' Association of California, signed by Fred E. Stivers as president, and a small hand grip which hid a bottle said to contain illicit liquor, William J. Long, 60 years of age, who admitted many of his friends called him 'doctor,' was arrested by Constable Ed P. Marion as he was about to leave his home at 123 North Emily Street, early last night. . . . (Los Angeles Times, July 24, 1926). Investigation report relates: "Long's only credentials was a 'Spiritual Healer's Commission' from the California State Spiritualists' Association 'commissioning and licensing him to practice spiritualistic healing for one year from date.'" This certificate relates that it is "valid from August 2, 1925, to August 2, 1926," and was "signed and corporate seal affixed December 5, 1925. . . . Fred E. Stivers, president, Idella McFarlin, secretary." One of Long's patients related that his treatment consisted of puncturing many holes in the skin of her legs, which became infected, and at the present time there exists an open sore some two or three inches across.

Dr. G. Carl H. McPheeters, local surgeon, who became involved in an investigation following the death of Leila A. Atkinson, was awaiting trial in the Superior Court today on a charge of forgery and a count of sending a message with intent to deceive. . . .—Fresno Bee, August 7, 1926.

A complaint was recently filed in Los Angeles charging Julio L. Mancillas with violation of the Medical Practice Act. It is asserted that he reported himself as connected with the General Hospital, and after his patients arrived at the hospital Mancillas would be suddenly called away. "Mancillas is one of our 'regular customers,' and no matter how often he gets into trouble he always comes back again."

Declaring her neck and face were disfigured as the result of treatments she took for the removal of superfluous hair by what is known as the "Marton Method," Miss J. M. Berger will seek \$35,000 damages from Jules M. Marton in a suit which was on file today in the Superior Court (Los Angeles Examiner, July 5, 1926). Previous mention appears in "News Items," June, 1926.

According to reports, Howard Lee Moffatt, M.D., was recently sentenced to serve six months in the county jail in Los Angeles on a charge of prescribing narcotics not in good faith, said sentence being suspended for a period

of two years on condition that the defendant take treatment for addiction.

Investigation re Luella Phinney (Mrs. E. L. Phinney) deceased, whose body was found on April 6, 1926, under her bed at 888 East Fifty-first Street, Los Angeles, discloses that she was formerly Ellen Luella Coon, under which name she was licensed to practice medicine in this state.

According to Associated Press dispatch dated Washington, D. C., July 14, 1926, many of the compounds advertised as containing radium have been found by the Agricultural Department to have little or no value because of the radium content, and a general warning was issued. "Less than 5 per cent of so-called radium hair tonics, bath compounds, tissue creams, tonic tablets, face powders, ointments, suppositories, mouth washes, demulcents, opiates, healing pads, and other preparations were found by the department to be radioactive, and these to very limited extents."

The activities of Paul Shirley, 331 Fresno Avenue, now in jail in lieu of \$2000 bail following his arrest last night on a statutory charge made by a woman patient at his clinic, will be investigated by the State Medical Board, it was learned today. Shirley told officers today that he is not a physician, but acts as an assistant to Dr. Alice Fuller, although the clinic is known as the Shirley Institute (San Francisco Examiner, July 29, 1926). It is related that Shirley formerly conducted the Shirley Cancer Institute on Twelfth Street, Oakland, California.

Press dispatches relate that Duncan E. Stewart, M. D., Huntington Park physician, was recently found guilty on a charge of selling narcotics, it being alleged that on June 30 Doctor Stewart sold forty-eight grains of morphine and cocaine to Madge Surber, and is alleged to have accepted \$8 from the woman for the prescription for narcotics.

L. P. Strayhorn, Texas physician, now residing at Montebello, escaped removal to Texas on a federal charge when Judge McCormick upheld a ruling made several months ago. Strayhorn is accused of violating the Federal Farm Bureau Act in connection with alleged falsifying as to the value of property in applying for a loan of \$6000. Several months ago United States Commissioner Head ruled that the matter should be handled here.—Los Angeles Record, August 11, 1926. See "News Items," May, 1926.

Nasaaki Tanimoto, mentioned in "News Items" of June, 1926, as having been convicted of violating the Medical Practice Act, was recently held to answer in Los Angeles on a charge of perjury in connection with his testimony.

Report having been made that Karl J. Weberg, licensed chiropractor and president of the Pasadena College of Chiropractic, had attended as a physician at the birth of some ten children, and information having been obtained from James Compton, D. C., secretary of the Chiropractic Board, that a licensed chiropractor was not permitted to do obstetrical work under his license, the matter was submitted to Chief Counsel Bianchi for an opinion, who, under date of July 7, 1926, opined in part as follows: "The practice of obstetrics is the practice of medicine and surgery, and I know of no provision in the chiropractic initiative which allows the holder of a chiropractic license to practice obstetrics, and such practice by one not so authorized by the Board of Medical Examiners is subject to the penalties prescribed by the act last named. See "News Items," July and August, 1926.

Until the general attitude of the American people toward public officials undergoes a radical change, the health officer must labor under the disadvantage of being regarded as just one of the army of office holders whose motives are frequently open to suspicion.—Matthias Nicoll, Jr., J. A. M. A.

Complacency is the death of people. It is the one distemper from which a nation cannot recover, once it has secured a grip upon the faculties of that nation.—Hon. Thomas J. Lennon, Justice Supreme Court of California.

## READERS' FORUM

Stanford University, California,  
July 27, 1926.

Dear Editor—I must compliment you upon your very excellent suggestion printed in CALIFORNIA AND WESTERN MEDICINE in July concerning The Health Dossier.

It seems to me that this is a real public health procedure. I have visions of the time coming when intelligent mothers will be interested enough in their children to see that such a dossier is started at birth and kept up to date, as you suggest.

Let me again thank you for your suggestion which, if carried out, would be most effective in the practice of both personal and public health.

C. O. SAPPINGTON,  
Acting Medical Adviser.

Santa Barbara, California,  
July 18, 1926.

To the Editor—I want to object to your "obsolete" clipping from "Medical Review of Reviews" which appeared in your last number, beginning "Indiscriminate and reckless removal of any and all tonsils has brought reproach to the medical profession." If this is true it is, I believe, a matter of ignorance fostered by the approval of those who should and could know better. Rather the reproach should be on those who are allowing their patients to stagger along under the burden of an infection and toxemia nearly overwhelming and failing to get relief in their secondary disease.

I want to repeat what I have said before, that the individual who has had his tonsils removed, even seemingly needlessly, is to be congratulated. Whether it can or cannot be demonstrated—and it usually can be—that there is chronic infection, he has lost a potential source of danger at slight risk for which he should be thankful.

The ultraconservative has been trying for years to prove benefits derived from retaining the tonsils. Only theories have resulted. He has tried the same line with the appendix, though with a less respectful hearing. Of course, there have been tonsils removed that the hosts could have lived with to a green old age. But the progressive, competent, and successful clinician is finding that he must remove all, even suspected focal infection in teeth, tonsils, and sinuses if he is to adequately treat his cases of cardiovascular, renal, gastric, pulmonary, orthopedic, and metabolic disease.

When we will see the results plain to the fairminded, look with suspicion at tonsils and urge patients to get rid of the dirty things whenever possible, we will have more grateful patients and results to brag of. For one needlessly removed hundreds are left, in adults, that, if not a present cause of ill health, are more than likely to cause invalidism and shortened life.

PHILIP C. MEANS.

P. S.—But I like our journal just the same! It's good.

San Leandro, California,  
July 20, 1926.

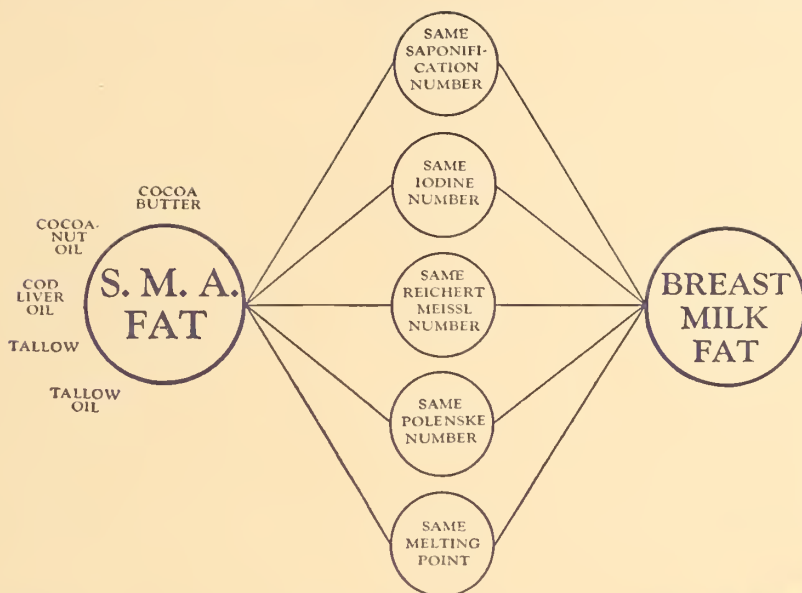
To the Editor—In your issue of July, page 86, appears a news item of the appointment of Dr. G. L. McLellan as health officer of the city of San Leandro.

Please be advised that Dr. Luther Michaels has been appointed health officer for said city.

E. F. HUTCHINGS.

**Pseudo-Hypertrophic Muscular Paralysis**—Philip Lewin, Chicago (Jour. A. M. A.), makes a preliminary report of a clinical study of thirty-nine cases of pseudo-hypertrophic muscular paralysis. It is his belief that the greatest progress in the understanding and treatment of this disease will come from careful studies along two lines, viz., carbohydrate-muscle metabolism and endocrinology. The recommendations for treatment are: a diet rich in all vitamins, large doses of calcium lactate in milk, epinephrine hypodermically or hypodermic tablets dissolved under the tongue, physiotherapy, and muscle re-education.





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# CALIFORNIA AND WESTERN MEDICINE

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## What is Mead's Standardized Cod Liver Oil?

*Mead's Standardized Cod Liver Oil* is accepted as a criterion of excellence not only by physicians, but also by other pharmaceutical manufacturers. *It is an established measure of quality regulated by a standard.*

Mead's is the first commercial oil tested to a standard of antirachitic potency. This standard was established after four years of investigation and testing of cod liver oils secured at the site of production in different countries of the world. Biological assay proved the *Newfoundland* oils to be most uniform in the active principle—the antirachitic factor or Vitamin D. Smaller doses of Newfoundland oil healed experimental rickets in animals in a shorter period of time than oils from other countries. Newfoundland oils also produced more prompt clinical evidence of healing of rickets in bones of infants as seen by the radiograph.

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A standard, uniform method of rendering each batch of oil.

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The selection for the physician of batches of oil that meet the standard for biological assay, and the disposal of oil

under the standard to tanneries and soap manufacturers.

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# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXV

OCTOBER, 1926

No. 4

## IS MEDICINE DRIFTING INTO LAY CONTROL?

By REXWALD BROWN \*

A DOCTOR OF MEDICINE in active practice in a well-known city takes a rather energetic interest in the progressive development of his municipality. Anent his efforts the editorial columns of a prominent local newspaper assailed him in this wise: "When Doctor Blank received the degree of M. D. these cabalistic initials meant that he was learned in medicine and not that he was learned in municipalities. The diploma when issued meant that he was fitted to practice medicine and not that he was fitted for the management of municipalities."

This editorial point of view is expressive of the general concept of the lay mind toward the participation of the medical profession in affairs other than those of the healing art. All too frequently are heard the statements that physicians do not possess the requisite knowledge in extra medical matters either to have an opinion on or take part in the general movements of concern to society at large. A corollary to this largely accepted conviction is the belief that a physician who concerns himself in any direct way with activities outside his professional fold cannot be a good physician in whose judgment and skill faith can be held.

This lay attitude indicative of some people's contempt of or indifference to medicine's deep relationship to all the structure of civilization should concern our profession to a degree apparently not fully appreciated. It is harrowing to read a paragraph in the report of a senior student to his department head, William J. Kerr, Professor of Medicine at the University of California. (CALIFORNIA AND WESTERN MEDICINE). Kerr is trying the experiment in medical education of apprenticing senior students to well-known practitioners in the state for a period of a month—a return to the preceptor influence. The student reported, among many impressions, the following: "An old druggist in the town said that after years of experience in this country and in Europe with doctors that they have the narrowest minds . . . of any profession. He is probably correct."

It would be easy to laugh off these incidents as purely local in character. They deserve attention, however, because they are straws being blown by the wind. Is the place of scientific medicine in the body politic as secure as we have thought? Have we assumed to the full our great responsibilities or are we becoming slack in thought and careless of our positions as guides in civilization? Are the aims and ideals of our profession being smothered by the commercialism of the age?

### EVIDENCES OF LAY CONTROL

Into the fabric of society are being woven new patterns of profound import. The world seethes with startling thoughts, impulses and reconstructive purposes in the spheres of religion, politics, economics, morals, education, and sociology. Wider knowledge, to which scientific medicine has made contribution, is the dynamic force in social reconstruction.

As we survey the movements in progress, a disquieting feature becomes more and more evident which should concern the medical profession as to its gravity. William E. Musgrave in an article of compelling interest in the issue of May 22 of the Journal of the A. M. A., "Is Universal Life Insurance Coming?" senses strongly the danger which insidiously begins to menace the ranks of organized scientific medicine. This menace is the lay control of medical activities.

There is a very considerable evidence in affirmation of this growing conviction. Musgrave tells us how the spread of life, health, and accident insurance is engulfing large numbers of medical men as

\* Rexwald Brown (Santa Barbara Clinic, Santa Barbara). M. D. Northwestern University, 1903. Graduate study: Intern Mercy Hospital, Chicago, 1903; graduate study in Europe, 1914. Previous honors: Second Lieutenant U. S. Marine Corps, Spanish-American War; Captain Medical Corps, U. S. Army; overseas service World War; president Southern California Medical Society, 1924-25; ex-president Santa Barbara Chamber of Commerce. Hospital connections: Attending surgeon Santa Barbara Cottage Hospital. Scientific organizations: Santa Barbara County Medical Society, C. M. A., Fellow A. M. A., Fellow A. C. of S., Fellow Los Angeles Clinical and Pathological Association, Fellow Pacific Coast Surgical Association. Present appointments: President Santa Barbara City Planning Commission. Practice limited to Surgery since 1919. Publications: "Fracture Clainp and Open Treatment of Fractures," Surg. Gynec. Obst., October, 1911; "Treatment of Fractures of Patella," California State J. Med., April, 1913; "Amebic Abscess of Liver with Pulmonary Sequelae," California State J. Med., July, 1921; "Group Medicine in Practice," A. M. A. Bulletin, December, 1923; "Tumor of Suprarenal," J. Urol., June, 1924. And some twenty others.

employees of the great insurance corporations. They become salaried men, subordinated to the positions of technicians and subjected to the policies of the companies.

The movements in the socializing of medicine, as projected or actually in operation, as compulsory health insurance or state medicine, serve to show the partial dominance of the lay mind and that of the politician in the affairs of medicine which embraces the science of public health. Departments of sanitation are frequently subject to political control and manipulation.

A vast work in educational hygiene and school health supervision is conducted by boards of education in this country. Associated with them are scores of voluntary organizations promoting health instruction, influencing standards and practices, creating public opinion, supplying funds for research and demonstrations, and assisting in the enactment of local and national hygienic legislation. In general this work is under the control and supervision of lay boards associated very loosely or not at all with scientific medicine.

Hospitals, in many ways the seats of the science and art of medicine, are largely managed and directed, their policies outlined, by lay boards formed of citizens whose social, religious or business standings are pre-eminent, or of politicians elected to positions of control. The few books written on hospital management assume without question that the policies of a hospital should be vested in boards of lay directors.

In the field of medical education the influence of great universities and of large financial foundations, their respective boards of trustees being very largely of lay personnel, becomes increasingly more pronounced. By promise and by inference of financial help they seek to regulate the placement of medical schools, the adoption of curriculums, and control the selection of and compensation of the teaching professors.

And in another sphere the man of medicine appears to be largely an adjunct or almost entirely disregarded. This is the sphere of social uplift or service. Its votaries number up into the thousands of lay people, and in organizations galore they further propaganda whose purpose is to make the world better. They expound and urge action upon, with a zeal which should be better directed, views on subjects such as heredity, birth control, and eugenics which medical men and biologists say are yet in the infancy of study and experiment.

In the portrayal of these outlined facts there is no intent to belittle the efforts being made by sincere and earnest lay men and women toward a healthier and happier world in which to live. But a note which insistently obtrudes itself throughout all these activities is disparagement of the capacities of physicians as thinkers, doers, administrators, and leaders outside the confines of actual medical practice, the personal relationship of physician to the sick patient.

Singular it is that doctors of medicine with backgrounds of general education and specific learning acquired over years of study not necessary in most vocations and callings have not the intelligence of

storekeepers, financiers, real estate dealers, manufacturers, plumbers, and other lay persons to grasp the principles underlying human endeavor and the knowledge to help formulate the laws conserving the general good of society.

This lay attitude should deeply concern us as physicians. It is one of the factors which calls forth the utterance of the editor of the *Indiana State Medical Journal* that within a few years organized medicine will be fighting for its very existence. The time has come for us to take stock of our affairs that we may determine the direction of our future. Why are we deemed impractical, babes in the woods in general affairs, incompetents in the understanding of social and political movements and useful only as technicians in the healing art?

#### THE WALL OF ALOOFNESS

The answer is that we have permitted ourselves to be walled off from society at large. It might better be said that we have walled ourselves off. And our isolation has been accomplished so effectively that even many who are sick do not try to look over the walls to see what scientific medicine has to offer for alleviation or cure, but seek relief from cultists and charlatans who bark their wonders (?) about the streets.

Scientific medicine has not expressed itself in a way to compel attention. It lives in an atmosphere of reserve, partial detachment from the rest of mankind. All reasons for the development of this atmosphere in which we live becomes concentrated in one reason, a code of behavior, which antedates the Christian era. The Hippocratic oath or code as a guide for medical men has become traditional, white with the age of centuries. The principles of ethics of the American Medical Association bear the imprint of this ancient standard.

But this "credo" of the profession, called by Gompertz "a monument of the highest rank in the history of civilization," when carefully studied is seen to be a moral guide in the relationships between student and teacher physician and between the physician and his patients. And in these relations the "credo" is and should be as binding today as it was in the days of the best in Greek civilization. The Golden Rule is the essence of the code.

Though nothing is said in the Oath of Hippocrates about the deportment of physicians in the movements for betterment and enlarged happiness in civilization, the medical mind has become imbued, over a period of centuries, with the conviction that aloofness from matters other than those of personal service to the sick is fundamental to the spirit of the code. How much a feeling has grown no one knows. It exists as do unwarranted traditions in other spheres of thought. And traditional beliefs are all too often strong deterrents to progress.

Traditional aloofness has become a despot and has made medical men slaves, fearful of the master and fearful of the opinions of the fellow-slaves. Any form of public expression by a physician on matters of medical or general concern, even in the interests of society, is considered by most professional



confrères a breach of the professional code. It is looked upon as a form of personal advertising.

Is this deadening attitude of mind in consonance with our Principles of Medical Ethics? One who carefully reads the context as a whole cannot find therein any sentence which tends to set medical men aside from the general concerns of existence. In truth the very opposite pertains. The first statement in the principles is, "A profession has for its prime object the service it can render to humanity." In the chapter entitled *The Duties of the Profession to the Public* it is stated that "Physicians as good citizens, and because their professional training specially qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interests of humanity." The concluding statement in the principles is, "These principles are primarily for the good of the public and their enforcement should be conducted in such a manner as shall deserve and receive the endorsement of the community."

Only loyalty to our profession withholds our recognition that public opinion toward us is far from endorsement of us and our methods. Scientific medicine must face the fact, however, that the public has lost confidence in us measurably, not alone as regards our inadequacy in health leadership, but even as competent in the management of disease. The responsibility for this condition rests squarely on the shoulders of medical men.

#### ORGANIZED MEDICINE LOSING CASTE

Common sense compels us to admit something is wrong within the structure of organized scientific medicine. We are losing caste, failing to register the worth of our ever mounting knowledge, muffing our opportunities for higher service, and we are in danger of becoming pawns instead of guides in progress. Medical men should be filled with shame that we are unable to acquaint the public with the values our profession can contribute to a growing civilization. Instead we bow our heads to organizations of lay people, as The American Association for Medical Progress, who pitying our poor endeavors, yet believing in us, attempt to do educational work for and in support of us.

Dr. Wendell C. Phillips, president of the American Medical Association, in his recent presidential address, published in the journal of the American Medical Association, April 24, challenges the public to make use of the brains resident in the body of the medical profession. The challenge should be to the medical profession to make use, of its own volition, of the brains it possesses so that the public may hearken to and act upon the words of organized medicine.

Granted that shackles binding our efforts must be removed, what is the method of procedure; what is the way of larger influence? Organized medicine itself must open the gates. That we are concerned about the damaging criticisms hurled at us is shown by two reactions in our profession. One is the growing desire to give the public information. This is

being done somewhat by the American Medical Association and by a few state societies through publications for lay reading. The other reaction is a demand for changes in the amount and character of the technical courses in the medical schools. There are arguments and papers about entrance requirements, some physicians insisting that medicine's difficulties would be solved by lowered standards of preliminary education; while others say such action would make the position of medicine even less happy than it now is.

#### THE WAY TO STRENGTH

Medicine's way to a position of strength in the minds of the people involves a change more profound than informative broadcasting or alterations in the character of pre and actual technical studies. The change must be that of nursing into compelling expression a voice now very weak, which carries, however, the truest note in scientific medicine's structure of service. The highest ideal of medicine is the promotion of individual, community, and national health.

The teaching of the science of medicine needs drastic revision so that a new tide of thought may sweep through the classrooms of the medical schools. In addition to studies in the science and art of medical practice, new course must be given inculcating students with knowledge of their high responsibilities as law givers to the people and as teachers of health. Graduates of today tell that during their years of study little or nothing is given them of the history of medicine through the centuries, of the relationship of medicine to life at large, of the forces ever tending to destroy scientific medicine, of the prejudices and ignorance of an indifferent public, of social spheres where the knowledge of the medical man could be useful, and of the worth of medicine in helping to advance civilization. And the subject of medical ethics which looms up so prominently after graduation is given only cursory consideration in most schools. In discussions of medical problems, young physician graduates of outstanding medical colleges have been heard to say that their introduction to ethics consisted of their being handed the Principles of Ethics at or about the time of their graduation.

Medical education in and out of college needs the attention of the members of organized scientific medicine. The errors of the past, the stupidities of our insularity, our failures to impress humankind of our values to them in all the spheres of life call us to an accounting with ourselves. We, the medical profession, must survey, must reinspect our positions in the light of present-day thought, which is throwing aside the hindrances to progress imposed by precedent, custom, and tradition. Where is scientific medicine heading, what is its concern with the vital problems of today, is its knowledge becoming humanized, and is it bearing aloft the emblems of leadership?

We medical men have become rather set in our ways. Consider our weekly, monthly or annual medical gatherings. There are hundreds of them—county, special, state, and national medical society meetings. And what is the general order of proce-

ture in all of them? Over 90 per cent of the time is devoted to the reading and discussion of scientific papers and presentation of clinical material.

The worth of an adequate number of such meetings is not decried. They are fundamental to the continuous diffusion among us of the discoveries and experiences in the fields of research and clinical medicine. The point is that our increasing familiarity with special fields of knowledge is blinding us to our relationships to life as a whole or is preventing us giving due consideration to our responsibilities in general affairs.

There must be an awakening to new purposes, new duties and expanded activities if organized scientific medicine is to be other than a competitor for the management of the sick with the pseudo-scientific and the ignorant and fanatical cultists. We must shatter our attitude of reserve and come out into the open as forceful advocates of the great aim of scientific medicine—the promotion of health.

Health is fundamental to achievement in all spheres of human activity. Scientific medicine should work continuously not only to seek out the laws of health, but also to make these laws operative in a progressive civilization. Scientific medicine, the facts of which are demonstrable and verifiable by observation, experiment and test, needs no defense, but the disciples of medicine who know the facts must learn that it is incumbent upon them to inspire confidence in themselves as expositors of the knowledge.

Through the avenues of the local, state, and national medical societies must scientific medicine enter the arena of larger human service. Our attack must be first upon the paralyzing routine of our meetings and upon a complaisant acceptance that our learning is for the elect only. Let us have a new order of procedure—half of each meeting or whole meetings at frequent intervals to be devoted to consideration of the matters immediately related to medical practice as to their effect upon our profession and upon society at large.

#### AN OUTSTANDING EXAMPLE OF MEDICAL LEADERSHIP

In these meetings we must face the problems which we now ignore and which the public tries to solve with more or less contemptuous disregard of medicine's counsel and guidance. Physicians must develop powers of leadership along all medical fronts. The wider biologic knowledge possessed by physicians as a class enables them better than others to formulate the policies which pertain to municipal and national health and sanitation, to educational hygiene, to medical economics, to hospital management, to social service, to medical education, and to the propagation of a virile race.

The policies formulated, medical men through intensive, associative effort must be the powers which introduce and influence acceptance of the policies in the life of the world. Is there any reason why we cannot be initiators, administrators and executives in our own fields as business men, financiers, engineers and others are in theirs?

To say that we cannot is to forget that in the

science of medicine there looms forth a figure of unparalleled administrative genius, Dr. W. G. Gorgas, whose life should ever stimulate us to the continued insistence that the public should adopt those scientific measures which create health. Doctor Gorgas, an executive and compelling force in the domain of medicine was the man who made it possible to build the Panama Canal. And until he became acclaimed the world over for his tremendous achievement he was assailed and derided, and his work was interfered with by the lay control in charge of the general administrative business and engineering conduct of the building of the canal. Noted lay executives and big men of affairs called him a stupid doctor with nonsensical ideas. Yet business acumen and engineering skill would have failed entirely in putting through the canal without the underlying medical knowledge made effective by a capable medical administrator.

#### THE RESPONSIBILITY OF SCIENTIFIC MEDICINE

Organized scientific medicine must make itself a dynamic force, respected and honored as basic to all progress. This is medicine's greatest responsibility. Medical men must take the offensive and convince humankind of the wealth of resources in medical science. The worth of the profession should be so splendidly revealed by the labors of physicians that great warmth of respect and support will always be conceded by the public. The place of medical science in the esteem and confidence of the lay mind should be so high that philanthropists would never hesitate to assist financially in the efforts made by the profession to better living conditions and alleviate suffering.

Medical men should make it obligatory upon themselves to render strict business accountings for the management of public service institutions and other trusts, but the policies directing the expenditures should not be dictated from without the circle of medicine. The rules governing clinical practice, medical research and the management of medicine's activities should emanate from within the profession and not from the lay public, whose efforts are so often dictated by business experience.

Scientific medicine is a profession whose evolution began as Osler has said in that wonderful Grecian era when Hippocrates lived and received his inspirations from the spirit of the times which asked of all measures, "Do they make life a better thing?" Business asks, "Do these measures produce a profit or make expenditures and income balance?"

A cloak of mystery has far too long been wrapped about the science of medicine. The disciples must tear it aside. The public must be taught that physicians are not in league with occult forces, that medical knowledge, like all other scientific knowledge, is subject to the laws of verifiable fact, that medical knowledge is not divisible into sects, and that no knowledge is of more worth than that which conduces to self-preservation and the continuance of the race. The studies essential for acquiring such knowledge, the ways of incorporating such knowl-



edge into the fabric of civilization and the methods most valuable in acquainting the public with fundamental medical truths are pre-eminently the affairs of organized scientific medicine and not those of the lay public.

## OBSTETRICAL ANESTHESIA

WITH SPECIAL REFERENCE TO THE SO-CALLED  
SYNERGISTIC ANESTHESIA OF GWATHMEY

By CHARLES HAROLD LEWIS \*

DISCUSSION by Charles B. Cortright, Berkeley; Reginald F. Grant, San Francisco; T. Henshaw Kelly, San Francisco.

THE purpose of this paper is to mention briefly the various means that have been used for alleviation of the suffering of obstetrical patients during delivery, to discuss the various methods which are in use, and to point out those methods which are the best suited for general practice.

*Ether*, because of its slow action and the amount required to produce analgesia, as well as its tendency to nauseate the patient and disturb the uterine contractions, is not a very successful means to be used in normal obstetrics unless its use is limited to the last part of the second stage. Where a more or less prolonged anesthetic is required, as in a forceps extraction or some other obstetrical operation, certainly ether is the anesthetic of choice, chiefly because it affords a much greater margin of safety than do other anesthetics. Hence, in general practice, especially where sufficient and competent help is not available, ether will probably continue to be used for an obstetrical anesthetic.

*Chloroform* seems to be used less and less for obstetrical anesthesia, although I agree with Williams when he says, "It is well known that the dangers distinctive of chloroform are markedly reduced before time of labor and further, generally speaking, chloroform is preferable in normal labor for by its use obstetrical anesthesia can be rapidly and safely produced. I believe it is practically devoid of danger when properly administered and should be used whenever there is time for its use unless the patient has conscientious objections to its employment." In a word, then, chloroform is preferable in normal deliveries for the reason that it is quicker in action, less disagreeable to the patient and comparatively as safe as ether when used at the proper time and in the proper amounts.

"*Twilight Sleep.*" Since Gauss and Krönig (1907) reported 1000 cases in which patients were administered the so-called "Dämmer Schlaf," there has been more or less discussion as to the merits and demerits of this method of relieving the pains of childbirth. At the present time this method is used

very little in the continental clinics and even where it originated it is only used for those patients who request it. Members of the staff at Freiburg told me in 1924 that only one-fourth of the women entering the clinic asked to have twilight sleep. It is scarcely used at all in England and has fallen quite largely into disrepute among American obstetricians, due to the fact that labor is likely to be prolonged, interference by forceps is more frequently necessary and fetal mortality has been higher. However, in Freiburg they maintained that by the use of Narcophen in the place of morphine and by using only one dose of this drug during the treatment the fetal mortality had been reduced so that it is no greater with this method than with any other. While this is commendable yet it is apparent that this method requires more time than is ordinarily possible for the busy general practitioner to devote to his obstetrical patient. For these reasons the use of twilight sleep is practically barred from general practice. One employing this method should unquestionably devote a good deal of time to the development of technique, should hospitalize his patients and should have trained attendants to observe the mother and especially to control and report the fetal heart rate.

*Lumbar Anesthesia* is mentioned only to be condemned. The results are said not to be uniform; the anesthetic effects are sometimes transient; headache and nausea often follow. The most serious objection lies in the fact that eight deaths were reported out of 1708 cases in which this method was used.

*Hypnotism.* A few deliveries under hypnotism have been reported but obviously it is a method not to be used in general practice for very few general practitioners can possibly assume the rôle of hypnotist, and furthermore the patient must be a very susceptible subject and one who has already been hypnotized on previous occasions.

*Nitrous Oxide and Oxygen* is one of the very best methods of producing obstetrical analgesia and anesthesia. On account of its cost the majority of patients can only afford to have it used during the second stage of labor. For some patients who can afford it "gas" may be used during a part of the first stage as well as during the second. In normal cases in a hospital this form of analgesia is certainly a most excellent one. For several years I carried a McKesson portable machine in the back of my car and allowed the nurse, the husband, the relative, or even the patient herself, to administer the gas during the second stage of labor. Such a plan is often a financial loss, however, for if a patient is unable to afford hospital care, she is not likely to be able to afford adequate compensation for the time and expense required for nitrous oxide analgesia.

The method of administering it is to begin just as the patient feels the contraction coming on, giving pure nitrous oxide or a mixture containing from 1 to 5 per cent of oxygen or air. The patient is instructed to take three or four deep inhalations of the gas in rapid succession and then after the last inhalation to hold the breath and bear down with as much strength as possible. Using this method the suffering in the second stage is considerably diminished. The patient is able to work better and more quietly

\* Charles Harold Lewis (Suite 210 Medical Bldg., Santa Monica). M. D. College of Medical Evangelists, 1920; A. B. Washington (D. C.) Missionary College. Graduate study: New York Lying-In Hospital, July-August, 1923; University of Vienna (Austria), September, 1923, to April, 1924; University of Halle (Germany), Professor Sellheim, April, 1924. General practice (special attention to Gynecology and Obstetrics) since 1920. Hospital connections: Member of staff of Santa Monica Hospital, Inc. Scientific organizations: Los Angeles County Medical Association, California Medical Association, A. M. A. Appointments: Assistant Professor Obstetrics, College of Medical Evangelists.

and in many cases the time of this stage is thereby considerably shortened. Full anesthesia should be given when the head passes the vulva and for this ether is best, either in combination with nitrous oxide and oxygen or alone if necessary.

I have not tried ethylene in obstetrics but believe it would not be as successful an analgesia as nitrous oxide on account of its disagreeable odor.

*Synergistic Anesthesia*, developed since January, 1923, is so-called because it is based on the synergistic action of several drugs, namely, magnesium sulphate, morphine, quinine, and alcohol. The idea was conceived by James T. Gwathmey and the experimental work was carried out in the Lying-In Hospital, New York City.

A number of formulae were used before the one in vogue at the present time became established.

This method seems to be fairly harmless, is not expensive, can be used by the average physician without special training and can be used in home or hospital. Synopsis of technique: (1) the usual preparations made and enema given; (2) one-fourth grain morphine dissolved in 2 cc. of 50 per cent magnesium sulphate is injected intramuscularly; (3) an ether instillation is given per rectum; (4) a third magnesium sulphate injection and the ether instillation may be repeated or not, as discussed hereafter. The preparation and enema given do not differ from the ordinary preparation and enema.

The injection of one-fourth grain morphine dissolved in 2 cc. of 50 per cent magnesium sulphate should be done with a 19-gauge needle one and one-half inches long and given deep in the gluteal region. The injection is commenced when contractions are strong, coming at intervals of three to five minutes and there should be at least two fingers' dilatation of the os uteri.

One-half hour after the first injection 2 cc. of 50 per cent magnesium sulphate is injected in the same manner but without the morphine. If the sedative effect of the hypodermic injections is good the ether instillation is withheld until the contractions are again strong and regular and the patient complains of pain. If the sedation is not good then one hour after the first injection the ether instillation may be given regardless of the amount of dilatation of the os. It is preferable to wait, however, if possible, until there is at least three fingers' dilatation. The rectal instillation is composed of the following:

Quinine hydrobromate .....	grains	20
Alcohol .....	drams	3
Ether .....	ounces	2½
Olive oil (good quality).....	gs. ad. ounces	4

In the original technique this mixture was first made by mixing the alcohol and quinine and adding the ether and olive oil. It was then bottled until time for use. I have obtained better results by mixing the alcohol, quinine and olive oil, and putting it up in a 4-ounce bottle, waiting to add the ether just before the instillation is to be given.

Details of the beginning of the rectal instillation are: It should be given through a small rubber catheter, size 20 or 22 French, using either a funnel or a large syringe; the ether mixture is warmed to

body temperature; the patient is placed on her left side with the buttocks at the edge of the bed. Vaseline should be liberally applied about the anus so that if a small amount of ether is spilled it will not burn. It is well to suggest to the patient that this procedure will help relieve her of pain, but one cannot promise absolute exemption from suffering. The patient should be told not to press down during the pain but rather to relax and to breathe deeply with her mouth open. She should be told to draw up with the sphincter as though to avoid expelling gas. Davis states that one ounce of plain olive oil should be injected into the rectum just before the ether mixture, and also one ounce just after the ether mixture, although good results have been obtained by injecting the ether mixture alone and the latter is simpler.

Asa B. Davis (Surg., Gyn. and Obs., June, 1925) describes the technique and discusses the subject thoroughly. He states that when the effect of the first ether instillation has worn off a second or even a third instillation may be given. I have never employed more than one and have felt that if good results were not obtained or if the labor was so prolonged as to require more, then some other method should be used or the patient should be assigned to that class of a percentage of failures which is bound to occur with the use of any method.

It is important not to begin the injections too early. It is also important not to delay them until later than the time indicated. If a rapid delivery is expected when the patient is first seen, the first part of the method may be used without the rectal instillation, if so desired.

Davis and his associates claim that 90 per cent of the patients secure some relief and many a great deal. I have used the method wherever possible and practical for the past sixteen months, and have seen many very good results. I believe that most of the poor results experienced with the method are due to faulty technique, improper administration or to mistakes in the time at which the various procedures are used. This seems to be one of the most difficult factors to control as no matter how experienced one is, it is often difficult to predict the length of time a delivery is likely to consume.

Davis, to his satisfaction, has used this method in over 300 home confinements.

In home deliveries this method, like the method of twilight sleep, consumes an inordinate amount of the physician's time. I therefore recommend its complete application only in hospital practice where one may properly instruct the nurses in the giving of the injections and instillations. On the other hand the injections of morphine and magnesium sulphate may be given alone at the patient's home with good results and considerable benefit.

Synergistic anesthesia is inexpensive, especially when compared to nitrous oxide-oxygen, and it affords more relief during the first stage of labor than any other method with the possible exception of twilight sleep. This method has been found safe in over 1500 labors in the Lying-In Hospital. It is not contraindicated in the presence of placenta praevia, toxæmia, or in the presence of cardiac complications. Davis states that no presentation or position is a contraindication to its use. The only



contraindications are diabetes, colitis, and auditory disturbances.

#### DISCUSSION

CHARLES B. CORTRIGHT, M. D. (2287 Telegraph Avenue, Berkeley)—To assist a patient in active labor by alleviating the agonizing pains through the proper and intelligent use of one or more of our well-known drugs is truly the proper thing to do.

Chloroform seems to be the most useful anesthetic. It is cheap, occupies small space in the handbag; almost any inexperienced person can administer it; patient arouses easily, usually without nausea and vomiting, and seldom are there any unfavorable results. Of course, like other anesthetics, it has its true contraindications.

Ether is the safest anesthetic we have at hand and, while not ideal for administration to "get the jump" on labor pains at the proper time, it is the best anesthetic we have for any obstetrical operation. It is bulky and, if very much is administered, will cause nausea and vomiting.

Twilight sleep can only be used in hospital practice and under the most exacting and painstaking conditions. It should never be used if there is any doubt about the healthy condition of the mother or fetus. It has been laid aside by most obstetricians on the shelf of antiquity as something that is better not mentioned. Lumbar anesthesia should be thoroughly condemned. Hypnotism does not sound good to me. Nitrous oxide and oxygen is a very good combination and should be used more often than it is. Although its cost is high, it is not prohibitive. The cost of the necessary machine is an important item of expense to the physician, and the impracticability of lugging it around together with small cylinders must not be forgotten. The supply of the gases is not inexhaustible and one is liable to run out of supplies at the most inopportune moment. Its field of best work is in the hospital. Nausea is rare on an empty stomach and contraindications are few. Synergistic anesthesia seems to be the very best that we have at hand to date.

With but few lessons in its use one can carry on an obstetrical case in private home or hospital and feel assured that he has done the proper thing at the proper time. If necessary, only a few inhalations of ether or chloroform are needed to help out at the end of the second stage and to keep the mother under better control. If there is a laceration as the result of the delivery, the patient is usually quiet enough to perform an immediate repair. Following a normal delivery after using this anesthetic, there are no untoward effects. Glycosuria and colitis seem to be the only contraindications.

REGINALD FRANKLIN GRANT, M. D. (Flood Building, San Francisco)—In discussing the morphine-magnesium sulphate injection and colonic ether instillations as a means to help control pain during the first two stages of labor, I wish to draw attention to the fact that this analgesic is an offspring of rectal anesthesia introduced by James T. Gwathmey and described by Johnson in the *N. Y. Med. Jour.*, October 28, 1916, page 846. Up to that time Gwathmey had performed 2000 operations under rectal anesthesia without fatalities. In 1923 he conceived a technique for the alleviation of labor pains, using in addition to his modified rectal anesthesia, a hypodermic injection of morphine and magnesium sulphate. As this hypodermis injection and rectal instillation does not abolish surgical pain, it cannot be called an anesthetic; but as it lessens surgical pain, it is a true analgesic and was so termed in Asa B. Davis' article in *Surg., Gyn. and Obs.*, June, 1925, page 868.

The original formula and the time and indication for its administration have been slightly changed the last year. It has been the custom to withhold the analgesic till there was three fingers' dilatation, the contractions active and occurring from three to five minutes apart. This, however, is now disregarded, and as soon as the patient goes into active labor, has severe pains (which vary according to the rigidity of the cervix) in association with colicky, ineffective uterine contractions, and also in those who are intolerant to pain or in whom much suffering is undesirable, the morphine-magnesium sulphate injection can be made immediately and dilatation will proceed faster and with less exhaustion on the part of the patient than if she were left alone to dilate her hypersensitive cervix

up to two or three fingers. Furthermore, the injection and ether instillation is given regardless of the position or presentation of the head. If after twenty minutes no results are obtained from the morphine-magnesium sulphate injection, the ether and oil instillation may be given.

After the patient has had her injection and rectal instillation, we have from two to six hours' time before the cervix is completely dilated and the patient is ready for delivery. When the cervix is completely dilated and the head strikes the perineum, the patient will again become restless, and an examination will disclose that she is ready for delivery.

The patient is now taken to the delivery room and receives one-half cc. of obstetrical pituitrin hypodermically, because the uterine contraction and expulsive forces of the uterus are nearly lost.

The thinning out of the perineum as the head stretches it again causes pain, and it is here that we use the nitrous oxide gas. When the pain is over, the gas is removed, and the patient is told to rest. This is repeated until the perineum is thinned out and blanches, when an episiotomy may be done during a pain and the head delivered.

When the baby has been delivered, the perineal sutures are put in place, but not tied. I now give another half cc. of pituitrin, which facilitates the delivery of the placenta, after which the perineal sutures are tied. Ergot may now be given and the patient put to bed.

In my opinion, failures are due to (1) too much dependence on the nurses to carry out the preliminary technique; (2) an improperly cleansed lower bowel; (3) an idiosyncrasy on the part of the patient to drugs like morphine and quinine. As this analgesic requires the additional administration of nitrous oxide gas during the delivery of the child, it is not a procedure to be used at home.

T. HENSHAW KELLY, M. D. (490 Post Street, San Francisco)—The experience upon which I base this discussion is that obtained from some of my own patients, but largely from those seen in association with R. Knight Smith of San Francisco.

Firstly, we find that in over 90 per cent of the cases in which Gwathmey's method of first stage anesthesia is used, the patients claim to have experienced great relief, although about 2 or 3 per cent of them seem to have become excited rather than quieted, and in these patients the course of the first stage of labor has not been changed in any respect.

Secondly, we feel, as a result of several experiences, that the morphine-magnesium sulphate combination had best not be used in a patient who is expected to deliver within an hour or an hour and a half. We have had some difficulty in reviving three babies in which this rule was not observed.

Thirdly, we find that the low application of forceps is necessary somewhat more frequently when this method has been used. The forceps are necessary to deliver the head over the perineum, because the occasional patient, still somewhat under the influence of the drugs employed, does not co-ordinate her expulsive powers sufficiently well to deliver the head spontaneously.

In other than the two instances mentioned above we have found no drawback to the method and use it constantly. The fourth-grain dose of morphine is much more efficient than the original sixth, and if sufficient time—at least one-half hour—is allowed to elapse before giving the rectal medication, almost no trouble is encountered in obtaining complete retention of the ethereal enema.

We also find that many patients are relieved of pain for one or two hours by the morphine-magnesium sulphate hypodermically, and in these we withhold the ether oil mixture until such time as they begin to be restless again. In this way it is often possible to prolong considerably the effective period of the analgesia.

We use nitrous-oxide oxygen mixtures during the pains of the second stage and find that the patient under the influence of the morphine and ether obtains much greater relief from the gas.

Having watched just about 250 of these patients now, and hearing their personal comments on the results obtained in their particular cases, I cannot but feel that this method of relieving some of the pain of the first stage is the greatest boon granted to the parturient woman since ether and chloroform became hers.

## ALLERGY: PRACTICAL EXPERIENCE VERSUS THEORY †

By ALFRED C. REED, M. D., *San Francisco*

### I. INTRODUCTION

I HAVE no new material and no statistics to present and it is not my intention to discuss contradictions between theory and practice in the field of allergy nor in the slightest degree to criticize the remarkable clinical results achieved by special workers in allergy. Their accomplishments constitute a recent and important chapter of advance in medical practice in which we all share advantage, and for which we are all grateful. It is my purpose in a rather imperfect way to make an attempt at orientation in the complex maze of allergic fact and fancy in which the practicing physician finds himself today. The attempt must be imperfect because even yet our knowledge is fragmentary and we can hardly begin to look behind the huge mass of data to the controlling laws of allergy which are doubtless much more intimately related to vital processes than we have thus far suspected.

### II. CLASSIFICATION OF ALLERGIC PHENOMENA

Classification of allergic phenomena can well follow Hanzlik's description ("The Basis of Allergic Phenomena," *Jour. Amer. Med. Assn.*, June 21, 1924) of allergy as the manifestations of altered physicochemical relations in the blood and tissues. Hanzlik divides allergic manifestations into two types. The first of these is anaphylactic. This is characterized by a certain sequence of events: (1) introduction parenterally or otherwise into the system of native or complex proteids; (2) a period of incubation in which hypersensitivity develops; (3) reintroduction of the same proteid is then followed by anaphylactic shock. This shock is shown by a variety of symptoms, such as fever, rashes, edema, joint pains, leukopenia, swollen lymph glands, etc.; (4) this anaphylactic shock can be transmitted by transfusion to insensitized animals, though in a milder degree; (5) increased excitability can be demonstrated in excised involuntary muscles of various organs; (6) histologic tissues changes and physicochemical blood and lymph changes are found; and (7) desensitization can be produced by treatment with the same and different proteins and a large number of other agents.

The second class of allergic phenomena includes idiosyncrasies, protein and nonprotein responses, colloid, irritative, and other reactions, etc. He describes the manifestations as follows: (1) anaphylactoid phenomena can be produced by a large variety of unrelated agents, native or complex proteins not being necessary; (2) anaphylactoid phenomena do not have an incubation period or preliminary sensitizing introduction; (3) the symptomatology is very similar to that of anaphylactic reactions; (4) apparently this hypersensitiveness can not be transferred by transfusion; (5) increased excitability of involuntary muscle has not been

demonstrated directly for most of this class of sensitizing agents. (Hanzlik notes certain exceptions); (6) histologic and physicochemical changes in blood and tissues are even more striking than with anaphylactic reactions; (7) desensitization can be produced by a considerable variety of agents, having no necessary chemical relation to the sensitizing agent.

Hanzlik reduces the basis of these two classes of allergic reactions to a common denominator, consisting of a disturbance in the physical and chemical mechanisms of the blood such that functional stimulation or depression of cells results in alteration of physiologic functions.

With such a clear-cut theoretical classification of allergic manifestations, we are ready to consider clinical pictures in the patient which are not fully explained by our current clinical practice.

### III. CLINICAL PHENOMENA IN THE LIGHT OF ALLERGIC THEORY

(1) The multiplicity of clinical evidences of allergy brings with it the necessity of correlating all such manifestations in each patient and of studying in large groups of patients the incidence of the different allergic symptoms in association with each other and especially with other pathologic changes, types of heredity, varieties of endocrine status, and nervous as well as psychologic environment. Increasing experience with patients in general leads to the conviction that whenever allergic evidences are present, all of these factors must be carefully studied in detail to substantiate a diagnosis. Diagnostic rules in turn can only follow collection of such information on a large scale. At present we sadly lack such information. It should be one of the first duties of allergy clinics to develop such studies. Allergic manifestations in all systems of the body should be studied after this fashion. The skin, gastrointestinal tract, eye, blood, endocrine organs, circulation, and nervous system, at least, ought to be searched and studied, as well as the respiratory tract. Proper intensive study along these lines might well give information of equal or greater value than the comparatively superficial tabulations we now deal with, of thousands of patients sensitized to thousands of more or less specific substances.

(2) It is impossible to believe that all or most allergic manifestations are specific for a definite antigenic substance alone. Our theoretical classification does not make it necessary and our clinical experience contradicts it. We see group sensitizations and spreading sensitizations and, finally, we see patients who react either with a skin test or by systematic phenomena to almost all proteins and even nonprotein irritants. If allergic symptoms were always due to specific substances which in turn gave specific skin reactions, our diagnostic study could safely be limited to such skin tests alone.

(3) It is impossible to believe that all allergic phenomena are produced by proteins. Simple chemical agents, colloids, metals, arsphenamin, coal-tar derivatives, and on through a long list, may react characteristically as well as proteins.

(4) From the clinical point of view it is evident that we need much more information as to the nature of food and drug idiosyncrasies. It is possible that studies directed here might be more fruitful of

† Read before San Francisco County Medical Society, November 10, 1925.



understanding of the pathology of allergy than the piling up of evidence on skin reactions in relation to asthma.

(5) We see a decidedly familial and hereditary relationship in a majority of allergic patients. While much has been written on this point, most of our data is too narrow and unqualified to be of service. There is concealed here a key which also may unlock some of the now hidden laws of allergy. Again, careful, intensive study is needed, and is remarkably rare. It is my belief that this aspect of the problem of allergy is one of the most important and that its solution will reveal the fundamental secret of allergy to be a function of the nervous system, whereas the evident pathology lies in the tissue cells.

(6) As has been intimated, we do not know the underlying pathology of allergy and this deficiency cripples us especially in dealing with a class of allergic patients free of constant special sensitizations, but whose autonomic nervous system is obviously at fault. These individuals drift along on empiric therapies and often develop frank major allergic phenomena. Too little emphasis, in this connection, has been placed on the rôle of suggestion, hysteria, psychic repressions and conflicts, and reflex habit in the production of serious allergic symptoms. Correspondingly, entirely too little use has been made of these factors in treatment, especially in the case of intractable asthmas.

(7) Observation of only a few allergic patients is sufficient to demonstrate how little we know of the selective qualities of allergic responses. (Why does a patient have asthma, instead of mucous colitis or hives?) This fact, too, indicates an underlying and at present unknown essential pathology. It also demonstrates that we have vastly more to learn of the operation of the immediately exciting causes of allergic reactions.

(8) The endocrine relations of allergy have been referred to repeatedly, but no comprehensive studies are known to me which have sought to elucidate experimentally the mutual influences of the endocrine organs and allergic states. Yet we see rather frequently patients in which endocrine disturbance has an undoubted relation to asthma and other allergic phenomena.

In concluding this section, allow me to say that I have selected eight clinical problems which we all see illustrated repeatedly in our patients, and whose solution is fully as important as the further accumulation of data from routine skin tests. No doubt other such problems will occur to each reader.

#### IV. CERTAIN PRACTICAL OBSERVATIONS DRAWN FROM A SURVEY OF THE PRESENT STATUS OF ALLERGY

(1) I am impressed with the high percentage of asthma patients in whom routine skin tests are usually negative, who secure relief by attention to paranasal sinus infections. This is a point which ordinarily receives inadequate attention. An unusually thorough investigation of these sinuses should be made in every case of asthma and allergic rhinitis. Contact points must be relieved. Contacts may cause asthma as a result of direct irritation, by producing local changes in the mucosa and by interfering with

free sinus drainage. A focal infection fully drained ceases to be a focal infection.

Many times we see asthmatic patients whose noses are pronounced free of significant pathology by competent specialists. Yet ethmoid infection is present and its treatment results in cure of the asthma. Vaccines are usually of great assistance, either routine autogenous, or by Solis-Cohen's method, where swabs are wiped in sterile test tubes, several cubic centimeters of the patient's blood are added, and a vaccine is prepared from the dominant growing organism. Dr. H. Y. McNaught has called special attention to the importance of cryptic ethmoid infections in this connection. We have a considerable series of patients where treatment along these lines has resulted in relief and cure. Some of these patients give positive skin tests to foods or epidermal or miscellaneous antigens, but treatment in line of the skin tests gives no relief.

(2) While it is true that climate may influence asthmas chiefly in a secondary way, by its relation to bacterial respiratory infections, or to dusts and pollens, nevertheless we should not be too hasty in dismissing other effects of barometric pressure, humidity, temperature, sunlight, and winds. Little accurate information is to be had on these points (even the influence of varying partial pressures in asthma being virtually unknown).

(3) We need to know more about the influence on allergic states, especially asthma, of such things as anesthesia, biliary jaundice, protozoal infections, and specific disease such as malaria and septic infections.

(4) We need particularly to remember that allergic phenomena are remarkably long-lived, and while easily influenced by numerous therapeutic procedures, tend to recur and relapse. It is a matter of common observation in special clinics as well as in private practice, that our patients have usually been treated already by a varying number of methods with varying degrees and durations of success. In asthma especially is this true. This point is emphasized in the second place by the numerous agents and methods recommended in medical practice for treatment of asthma, and in the third place is distinguished by the weird variety of patent medicines and nostrums advertised for its relief. Such a condition does not obtain in malaria or other diseases where we have specific remedies. These considerations illustrate the necessity of getting what Dr. Charles Miner Cooper calls a longitudinal section of the patient. Sir James McKenzie followed heart cases twenty-five years to reach valid conclusions. A similar method in asthma would save much space in periodicals and would greatly enhance our actual evaluation of treatment. We need records of immediate data, but we sorely need more complete histories of later progress. The same consideration has been forced on us in the case of such diseases as syphilis and amebiasis.

(5) We all recognize the great contribution to our knowledge made by the comparative standardization of skin antigen reactions. We have welcomed, too, improved methods of manufacture and efforts by many workers, to secure the exact type and quality of antigens which may be at fault in a given patient in a given locality. This detail is valuable

and important. We must not, however, forget that the method of antigenic skin tests has merely opened a gate through which we can proceed to a closer study of this huge subject.

(6) In asthma, especially, because of its chronic and relapsing nature, patients naturally grasp at every straw and seek any method, no matter how absurd or useless, that promises relief. We have to remember the profound psychologic influences often so easily brought to bear on asthmatics. Optimism and encouragement are easily engendered with the suggested hope of cure. Such factors, added to a substratum of empirical therapeutics and utilization of what really scientific knowledge of allergy is available, leads the practicing physician face to face with two serious dangers. These dangers we see exemplified in the daily press on the one hand, and in medical literature on the other. The first danger, to which true physicians are not prone, is that of unmitigated commercialized quackery. This is flagrantly illustrated in various advertising institutions and individuals. The second danger is that of more or less unconscious exploitation of patients on the same premises as above, accompanied by an overly optimistic judgment of results obtained. We must guard against these easy tendencies, endeavor to maintain an impersonal and judicial attitude toward the facts, and realize the urgent need of greatly broadening our allergic horizon.

#### V. CONCLUSION

While the absolute or underlying essential pathology of allergy is unknown, we have now definite lines of approach to an understanding of it. One of these is the use of skin antigenic reactions. We have reviewed some of the outstanding problems of allergy in clinical work and have recorded a few observations on the present status of allergy in medical practice. It is essential to broaden our observation and research. W. L. Brown has recently (*Brit. Med. Jour.*, Aug. 29, 1925) given a summary of the treatment of asthma which we might well extend to the treatment of allergic states in general. Brown summarizes the treatment as follows: Study the psychic features of the patient; remove peripheral sources of irritation, especially in the upper respiratory tract; develop respiratory intake by chest exercises; desensitize (or immunize) when possible; restore balance in favor of the sympathetic system; attend to the general hygiene. These are the best treatment rules I have seen.

Keeping up on current literature, either medical or general, is a physical impossibility; and those who make the attempt will spend every spare moment at it and will still miss much that is good. He will also miss much that is different, and much that is bad. His bereavement is not without a silver lining. When it is once realized that keeping up on current literature is an impossibility, the thought at once occurs, "Why not miss a little bit more current stuff and have time to enjoy a few things which have been proved to be classics." This is the only way out of a bad situation. Reading time to be most effective must be budgeted, and the budget should make ample provision for a careful reading of the classics—at least those which prove most interesting. To miss any good current material is lamentable to be sure; but to miss all the gems of past ages is a tragedy.—*Bull. Wayne County Med. Soc.*

## THE NEURASTHENIC PATIENT

By OSCAR F. JOHNSON \*

*If we look, look long and thoroughly, we will find that our neurasthenic patients are sick. I believe that there is a physical basis for most patients' complaints, and when we say that a patient is a neurasthenic, it is a refined way of confessing our ignorance.*

*I believe that true neurasthenia is one of the rarest of diseases. When we examine a patient who suggests neurasthenia, in all probability there is a physical cause for his condition.*

DISCUSSION by Julian Mast Wolfsohn, San Francisco; R. A. Cushman, Santa Ana; Edward D. Kremers, Pasadena.

WITH our present knowledge of disease we may say that all human ills may be divided into three groups: To the first group belong those that have a known biological basis, such as typhoid, tuberculosis, malaria, etc. To the second group belong diseases which have a well-known histopathological basis, but whose etiology is generally unknown, such as cancer, arteriosclerosis, nephritis, etc. To the third group belong diseases which up to the present have no demonstrable pathology, such as neurasthenia, hysteria, and the various psychic disturbances. These groups are gradually and steadily changing for the reason that our diagnostic armamentarium is becoming more and more a means of precision and accuracy.

Let us for a moment analyze the neurasthenic patient; let us come to a comprehensive understanding of his textbook characteristics; and then let us draw conclusions. We are told by such men as Dercum and Beard, "in neurasthenia we find an individual who has lost a large part of his stamina." He is one who often has an imaginary ailment for which there can be found no local biological explanation. This is called irritable weakness. Neurasthenia is said to be present among people who have exhausted their reserve, and who believe they have malfunctions of certain organs or tissues. The neurasthenic is typically one who is introspective, one who thinks about his ailments to an abnormal degree, and whose life and actions are colored and made sordid by these so-called imaginary ailments. We find neurasthenia among women who, because of excessive and laborious work, use up their reserve strength, who in due course of time develop headaches, backaches, numbness, and all manner of obscure symptoms, such as tingling, heat, cold, tightness, etc. And so using the information given by the older writers we have a vast group of symptoms. These older writers were specialists, their capacity for detail made them geniuses in their respective fields. Their patients had been selected, and re-selected from among a large group of patients. The typical and genuinely neurasthenic patient is hard to find, and if he is a true neurasthenic, according to the older authors, there is no physical basis for his complaint.

But are we competent to judge when a patient is a neurasthenic? We have gone entirely too far and have been unjust to too many patients who were really and fundamentally ill. Neurasthenia has be-

\* Oscar Frederic Johnson (510 Physicians' Building, 1027 Tenth Street, Sacramento). M. D. Stanford University. 1919. Practice: General (Internal Medicine), Hospital connections: Sutter Hospital. Appointments: California State Board of Health, Malaria Control, Shasta County, 1919.



come a word that has lost its meaning; it has come to be a word synonymous with ignorance. It is often far easier to say that a patient is a neurasthenic than to diagnose a deep-seated and obscure disease. We have a host of new discoveries based upon our newer findings in endocrinology. We have startling new discoveries in disturbances of the sympathetic system, which gradually and steadily make our diagnostic opinions more accurate. It is the purpose of this paper to draw attention to this great medical condition that we call neurasthenia, to view it from an angle seldom mentioned in our journals, and almost never in our textbooks.

I shall enumerate five "typical cases of neurasthenia" that have come under my personal observation: patients unmistakably neurasthenic, and from these histories the theme of this paper may be easily deduced. These five patients do not represent all the neurasthenics that have been under observation; they have been chosen, rather, to cover the general field of medicine.

#### CASE HISTORIES

**CASE I.** An American sailor, age 26. Patient came to the office in 1922, complaining of nervousness. Four years ago patient fell and struck his head and was rendered unconscious. About the same time, or shortly thereafter, he had an attack of influenza. Since this time he has had a feeling that the top of his head was diseased, that there was a concealed fracture, and that from his head certain peculiar cloudlike sensation emanated. He believed he was going to lose his mind. When looking at the floor, the floor would seem to arise and oscillate back and forth. When he was thinking and talking, great varieties of thoughts would pass through his mind before he could give expression to them. He was apprehensive. He was afraid to be alone, and would stay up until he was so tired that he would fall asleep in his chair. He never allowed himself to be in a room alone, and whenever possible he spent his time with other people. His conversation was continuously about himself. He gave a history that at the time he was in the navy, and since then, he had been under constant medical care, had always been treated as a nervous individual and had been given medicine of every kind to quiet his nerves. The patient was given the ordinary routine examination, and the first thing discovered was that he had a fever of 99. A more careful examination revealed that the patient had an active pulmonary tuberculosis; that tubercle bacilli were found in his sputum and cavities were present in both lungs. He was suffering from a toxemia, the direct result of his tuberculosis. This patient was a neurasthenic, had been treated for neurasthenia, but his physical illness had been overlooked.

**CASE II.** An American housewife, age 46, complained that for the past several months she found it difficult to swallow, or to talk, and at times as she swallowed, the food would lodge in her nasopharynx. At other times, during her conversation, she found it difficult to articulate, and as she thought of these things articulation became more difficult. Her history was not typical of any physical disturbance. All physical findings were negative. She was examined by a nose and throat specialist, who found her throat normal. Every laboratory test was negative. She was diagnosed as a neurasthenic. It was suggested that a psychoanalysis be done, to determine the complex or the psychic basis for this peculiar dysarthria and dysphagia. The patient was treated by psychoanalysis, and this interesting psychic complex was revealed: About fifteen years previously the patient had made an unfortunate marriage. Her married life was intolerable and it was impossible for her to continue living with her husband. A child was born, and later the patient was divorced. She eventually married again, and after her second marriage she consulted her priest, who informed her that she committed a wrong when she left her first husband. Certain other restrictions were

placed upon her. She had told her child that her first husband was dead. The patient knew that her first husband was apt to return any time to see or claim the child. She knew that her life was in constant and violent contradiction to the dictates of her church. She was, therefore, living in a constant physical and spiritual dread. At every meal when she sat down with her husband these unpleasant thoughts would recur, and one would be justified, from a medical or physical standpoint, to say that here was a true psychosis based upon a deep and hidden complex. A physician was called in consultation, and he gave this advice: If a great shock could be induced, or the patient given a therapeutic trauma, in all probability she would improve. It was obviously impossible for us as physicians to remove the cause of her worries. The patient was brought to the operating room in order to give her the benefit of a profound impression, an anesthetic was given and a bronchoscope passed. But in passing the instrument the larynx and trachea were examined, and the patient was found to have a cancer of the larynx. This case illustrates a neurasthenic who was seriously and hopelessly sick, but had a textbook picture of a psychic or neurasthenic background.

**CASE III.** An American printer, age 64, was first seen with what appeared to be an acute attack of cholecystitis. Under diet, sedatives, and simple therapeutics the patient improved. Shortly thereafter he became hoarse, and in a few months he developed a peculiar and constant pain in the posterior mastoid region. All physical findings were negative, except for one or two bad teeth and a rather low blood pressure. The patient was advised to have the teeth treated, because it was thought that his pain was due to a neuralgia secondary to a focus of infection. The patient disappeared. About sixteen months later he returned with a history that he had been to chiropractors, specialists, and mineral springs, with no relief. His employment had consisted of very unpleasant work. He was tired, in search of sympathy, and would sit for hours waiting for a chance to tell his tale of woe. There were domestic difficulties and the patient got no sympathy at home, or from his new faith, Christian Science. The patient had had his uvula amputated twice, because of his cough; had been advised that he had an infected antrum, and that an operation might be beneficial. He gave the information that he had been seen by two syphilographers and had been told that he had no syphilis. Information from a member of his family was to the effect that he loved to go to doctors—in fact, his whole family were neurotic and were not self-reliant. But in spite of the patient's many explorations in the different medical worlds, he continued to complain of pain in his neck. The second time this patient came to the office his physical condition was about the same as when first seen sixteen months before, the difference being that his doctor dreaded more than ever the ordeal of having to hear the long story of his misfortunes. The patient this time was given a very careful examination, and it was found that he had a widening of the sternal dullness, a tracheal tug, and other evidences of an aortic aneurism. X-ray corroborated this finding. The Wassermann report was weakly positive. This neurasthenic patient had an undiagnosed aneurism as the basis for his neurasthenia, and had spent sixteen months or two years in going from one doctor to another.

**CASE IV.** Miss E., a foreign-born domestic, suffered from backache. She was examined by orthopedic surgeons, but no cause was found for her backache. She was referred from one department to the other of a general hospital. Finally, after having been given the benefit of immobilizing supports and suggestions from the various departments, the patient was sent to the neurological department to determine the type of psychosis from which she suffered. The various specialists had each examined her various organs, which they found to be normal. The outpatient department of neurology sent her to the hospital for study. From what psychic condition did she suffer? Why did her mind function in such a way that she should believe her back was diseased? Physical examination was negative; catheterized bladder specimen showed blood in the urine. Radiographic examination of the ureters showed two small shadows in the right ureter.

Another neurasthenic patient who was not neurasthenic, but suffering from an actual physical cause.

CASE V. An American farmer, age 57, who about two years before had been ill in a hospital with bilateral neuralgia of both arms. He had at this time been very sick, and had been given quantities of morphine to quiet his pain. Patient stated that since this time he had been unable to work, read, or concentrate on any one task. His wife did all the work. His insurance company sent him to a specialist for diagnosis. In brief, the result of the specialist's examination was this: "The patient is a neurotic, he is lazy, and no medical care or insurance is recommended." This patient when examined showed a most perfect example of the late effects of lethargic encephalitis—the mask-like face, sluggish cerebration, typical walk, with the customary negative laboratory findings. He had been called a neurasthenic because it was a convenient diagnosis. Yet for three years the family had gotten no insurance, and the patient had been the object of ridicule by his neighbors and acquaintances.

The above five cases were selected because they were recognized as neurasthenics by one or more physicians and because I had personally seen them and had at first also thought they were neurasthenics.

#### DISCUSSION

JULIAN MAST WOLFSOHN, M. D. (490 Post Street, San Francisco)—Doctor Johnson has called to our attention, at a very opportune moment, a subject which, to me, has always been one of the weak points in the education and practice of physicians.

The diagnosis, neurasthenia, has been a cloak which shielded the ignorance of an accurate diagnosis. For the past thirteen years I have never seen one patient whom I conscientiously could label neurasthenic according to Weir Mitchell's classification. How much better it is to admit one's diagnostic weakness and label these cases Neurasthenic States—Cause (?). Neurasthenic state is a bodily condition, not a mental one, and depends on errors of metabolism.

The diagnosis of neurasthenia is usually the result of errors of omission in observation rather than errors of commission.

No doubt as we look back over our files we can find cases similar to those Johnson has portrayed to us. Within the last year I recall two patients treated as neurasthenics, each of which had early dementia paralytica. The physician had neglected to make a Wassermann test, because he took for granted the patients' positions as respectable housewives. Another class of neurasthenics suffer from traumatic neuroses. These are common. I have seen no less than ten this year, every one of whom had had previous head injuries with no demonstrable physical defect.

Some of us are coming to believe that there are molecular changes in the nerve parenchyma and disturbances in the cerebral circulation, the latter of which are responsible for the headaches, unusual head sensations, insomnia, etc.

One word must be said about the patient who, on the other hand, is treated for organic disease, but who is really suffering from psychic neurosis. This is a pitfall which, in the majority of instances, is just as avoidable as the diagnosis of neurasthenia when a patient has an organic basis for her complaint.

It would be a good idea, I believe, to eliminate the diagnosis of neurasthenia from textbooks, and apply the suggested term neurasthenic state. This would suggest an attitude of investigation toward the patient's symptoms.

R. A. CUSHMAN, M. D. (Santa Ana)—Doctor Johnson does well in urging us to be extremely painstaking in search for the cause in each case of neurasthenia. The typical neurasthenic usually presents such a mass of more or less distinct subjective symptoms and so few obscure objective ones, that one should be ever alert to discover and remove the offending cause.

An individual believes himself to be healthy as long as none of his physical or mental activities impresses themselves upon his mind as being abnormal. If he is a person who reacts excessively to physical or mental

stimuli, a symptom or sensation will impress itself upon him more profoundly than if he reacts as does the more moderate, average individual. One person may have a much diseased organ or function, but consciously or unconsciously does not allow this condition to affect his customary activities; while another person with the most trivial ailment will suffer apparently great physical or mental disturbance. It is the difference in the individual make-up that determines whether he will ignore malfunctions or suffer from them.

While in the main I agree with the essayist that many malfunctions are diagnosed neurasthenia which are, in fact, symptoms of some organic disease that has been overlooked, still I am old-fashioned enough to believe that quite a percentage of symptoms complained of do not originate in any so far diagnosed cause. Many of these patients crave sympathy, are fundamentally indolent, and apparently enjoy bad health. They have built up a complex that exists as an entirety with but slight, if any, foundation of real disease.

This statement seems to be borne out by the history of many who fall into the hands of non-medical cults and apparently receive so much benefit. For we all know that there is absolutely nothing in the practice of these fads that would relieve a diseased physical or mental situation, except to influence the point of view of the patient upon his condition.

I agree with Doctor Wolfsohn that many of these so-called neurasthenics are really suffering from some psychopathic state rather than a disease of the organs to which the patient may refer as the seat of his trouble.

When these patients present themselves for treatment, it goes without saying that a most careful, repeated search should be made for the underlying cause; but bear in mind that for want of a better term, there may be many whom we shall have to class as "neurotic" or "psychopathic."

EDWARD D. KREMERS, M. D. (Las Encinas Sanitarium, Pasadena)—Doctor Johnson's article is a plea for more accurate diagnosis and, I think, there is no disagreement with this plea. The term "neurasthenia" is an old one and is generally used to denote great exhaustion, both physical and mental, of a well-known kind. In some instances perhaps a better term would be psychasthenia, or the simpler term asthenia. It is not necessary to quibble over terms and I agree entirely with what Doctor Wolfsohn and Doctor Cushman have said.

Not many of us will deny that there is such a thing as a psychoneurosis; that there is a psychogenic factor in illness; and that many sick persons are restored to health by an appreciation of and a correction of psychic difficulties. Patients may be harmed by a lack of appreciation of their true disorders, and this is also a fault in diagnosis. People vary greatly in their make-ups and react in various ways to strain of various kinds. Nervousness in patients does not necessarily mean inferiority. I am fond of saying that all of us are more or less neurotic and that any one of us may show signs of nervousness under certain excessive strain. There comes a time when circumstances are too much for the individual, and wrong methods of thinking will often be found as a causative factor, though perhaps not the only factor. It is wise to attempt to divide illnesses into functional and organic. We will understand them better if we do this. Both varieties may be found in the same patient and the same illness. An organic condition may be found with a functional one, and vice versa. Tuberculosis or syphilis may be found in a neurotic and need not be the cause of the symptoms of which the patient complains. Many patients who are substandard physically and inefficient for one reason or another become neurotic.

What practical things are there in this discussion? There are many, and a few points may be set down. These are given because we sometimes need to be reminded:

1. In the examination of any patient, try to be thorough. Take careful histories, which often must be searching, and do careful routine examinations. Keep records.

2. In the care of a patient, do not forget that there may be changes in condition.

3. Study patients with an open mind. Be objective in investigations. Do not be surprised to find things that were not expected.



4. In dealing with the neurotic, it is especially important to be honest, careful, kindly and patient. If you haven't time to listen to him, refer him to one who has. Otherwise he may land in the hands of some unscrupulous practitioner.

5. Be cautious about recommending surgery for the neurotic. Be sure that this is necessary.

6. Try to be optimistic with the neurotic person. It is easy to get discouraged, but hard to regain a courage once lost.

I think we are all agreed on these things, but I also think it is well to discuss them.

## THE PROBLEM OF PROLAPSE IN YOUNG WOMEN WITH CYSTOCELE AND RECTOCELE

By FRANK W. LYNCH \*

*I desire to stress the importance of prophylaxis in preventing marked vaginal tears during labor; of postnatal care and pessary support; of proper selection of cases for operation; of treating cystocele and rectocele by surgery while the lesion, although sufficient to demand treatment, is fairly simple; by the greatest care in conducting the subsequent labors of such women; and by the greatest respect for the peritoneal cavity of the individual when treating uterine displacement.*

DISCUSSION by Frank C. Ainley, Los Angeles; Titian Coffey, Los Angeles; Alfred Baker Spalding, San Francisco.

FOR a number of years it has been well known that pelvic fascia may rupture at various places during labor and allow the development of the various pelvic hernias known as cystocele, enterocele, rectocele, and procidentia. The resultant hernia varies. When the rupture is chiefly in the bases of the broad and uterosacral ligaments, the resultant deformity is prolapse of the uterus, and since the pubocervical fascia supporting the bladder runs into the bases of the broad ligament, any prolapse of the uterus is accompanied by dropping of the bladder. When the fascial tear is between the bladder and cervix, the essential lesion is a cystocele; and when immediately behind the cervix, a rectocele. The details of the supports and lesions of the pelvic floor have been elaborated to Americans chiefly by Halban, Tandler, Martin, Frank, Watkins, Ward, Spalding, and a few others.

These hernias can be cured only by fairly extensive surgical procedures, necessitating much care and detail in technic, although they rarely restore the overstretched, torn or atrophic meshwork of fascia and muscle to anatomic completeness. Large hernias in young women are most difficult to cure unless the vagina is unduly narrowed. Consequently, the wise physician will aim to avoid such mutilating procedures by seeking to cure the process while it is in the earlier stages, unless it can be controlled by pessary treatment until the patient has passed the child-bearing period.

The rational way to prevent prolapse is to improve obstetrics and make procidentia a compara-

tively rare finding. There is no doubt but that this can be done. We cannot overemphasize the necessity of keeping the bladder and rectum empty during labor, of rupturing the membranes at the beginning of the second stage of labor, of restricting any voluntary bearing down, or attempts at delivery, until the cervix is completely dilated, of primary repair of cervical lacerations, and of making episiotomies and building up the perineum in layers at the conclusion of labor. Nor can we overstate the value of the kangaroo walk as a routine treatment for the first month after the woman has returned to her home.

Good obstetrics also demands postnatal care for an entire year following labor, during which time cervical eversions should be cleared up by cautery treatment and uterine displacements should be sought for and corrected when found, and held in place by pessary treatment maintained for an entire year. In case of doubt, pessary treatment is a wise procedure. It will do much to restrict symptoms from slight injuries to the fascia and often prevent the necessity of operating at all. We have demonstrated to our complete satisfaction that pessary treatment maintained for one year after labor will reduce the incidence of retroversion to 50 per cent of that now actually found.

Fascial injuries occur chiefly in first labors, and in primiparous women we therefore find the best chance for postnatal care. In any case presenting lesions which result from the trauma of labor, there is a long period during which the injury does not give compelling symptoms. Proper dietetic and hygienic care may accomplish wonders. Cystocele and rectocele develop as sliding hernias starting as small deformities which gradually increase in size. It is common knowledge that complete procidentia does not develop usually until the woman is past the menopause. The surgeon should operate while the case is relatively simple and not await the development of a complete prolapse, provided that the hernia is developing and causing symptoms and the condition does not respond to nonsurgical methods. Yet the surgeon should use the greatest caution and restrict his plastic work upon child-bearing women to the lowest possible per cent. I feel that in any case he should await the development of symptoms and not be guided entirely by anatomic considerations. If, however, the condition of the woman demands operation, he should proceed confidently since a good repair should withstand the strain of nearly any labor that has been intelligently treated and has been followed by proper postnatal care. If the repair is stretched out I see no objection to a secondary repair immediately following delivery if the patient's condition permits. We have made without any bad results many secondary posterior repairs immediately following labor upon women who first came to us in pregnancy with relaxed vaginal outlets. Personally, I have delivered scores of women following secondary repairs and suspensions without return of the hernia or retroversion or retroflexion. If operation is really necessary, enough should be done to cure the patient. The operation should not be restricted necessarily to lower work.

In our experience, prolapse of the uterus is always attended by some degree of cystocele or rectocele,

\* Frank W. Lynch (University of California Hospital, San Francisco). M. D. Johns Hopkins Medical School. Practice limited to Obstetrics and Gynecology. Hospital connections: University of California Hospital. Appointments: Professor of Obstetrics and Gynecology, University of California Medical School. Publications: "Pelvic Neoplasms," in collaboration with Alice Maxwell, published by D. Appleton & Co., New York; Bryant-Buck, "American Practice of Surgery," in collaboration with J. B. Murphy, published by William Wood & Company, New York; about fifty contributions to American and German literature.

although either rectocele or cystocele may occur independently of prolapse. Care must be used in ascertaining the condition of the cervix because a hypertrophied cervix associated with cystocele and rectocele is often mistaken for prolapse. Prolapse, plus cystocele and rectocele, cannot be successfully cured in young women by repair of the cystocele and rectocele alone. Prolapse almost invariably occurs in women whose uterus is markedly retroflexed. Our follow-up work has demonstrated that retroversion-flexions developing as a result of labor are due to lacerations in the cardinal ligaments. These cases always exhibit some degree of descent, and constitute a group which sooner or later develop symptoms as a sequence to the lesions. The primary step, therefore, should be a well selected round ligament operation, performed, however, after the lower work has been completed.

There are four classes of round ligament operations, divided (1) accordingly as the round ligament is shortened to pull through the inguinal canal, the Alexander and its modifications by Simpson, Barrett, Mayo, and others; (2) accordingly as the uterus is suspended from the abdominal wall, the Olshausen method or some one of its modifications as the Gilliam, etc.; or (3) as the uterus is supported by the plication of the round ligament in front of the uterus as the Coffey suspension, or plicated behind as in the Webster. Ventrosuspension should not be considered as it is not a proper operation. Personally, we have utilized at various times the Alexander as modified by Simpson, the Olshausen as such and as modified by Gilliam and others, the Coffey, Webster, Mann, and a plication operation which we ourselves described. However, we have found that no one operation serves for all cases because of the varying condition of the round ligament, the different angles in which the inguinal canal comes into the abdominal cavity, the varying firmness of the attachment of the round ligament in the canal, and the different types of insertion of the round ligament into the uterus. The frequency of the fan-shaped uterine insertion which really pulls only from the bladder level has not been properly emphasized. The Webster, when possible, is the operation of our choice, since there is no other procedure which elevates the uterus and ovaries in as satisfactory a manner and holds it forward in flexion without kinking the tubes. The objections to the Webster are based entirely upon a faulty understanding of the method of performing it since, unfortunately, Webster never described the improved method which he used following 1908. There are many cases, however, in which the Webster operation should not be done. It is not applicable to cases of retrodisplacement which, although presenting symptoms as a result of the trauma of labor developed originally on a congenital basis, or in cases in which the inguinal canals are not normally placed. In such cases we use the Olshausen modification, reserving the Coffey for those in which there is need for peritonealization to the anterior uterine wall. The uterosacral operation as ordinarily done is valueless since it utilizes only peritoneal folds. We have invariably found that, when opening the abdomen of cases upon whom this operation had been performed, the folds had stretched and that the

fixation suture could be demonstrated in the uterine part of the fold. The true uterosacral lies so deep that it cannot be utilized as a support to hold the cervix back without extensive dissection and considerable bleeding if the work is done from above. By making use of the anatomic facts noted above, we have operated since 1919 without recurrence of retroversion. Before that time, we had 3.3 per cent in 192 cases followed one to three and a half years.

Personally we are unable to appreciate that recurrence frequently follows cystocele operations. We have followed up our patients for years and find no recurrences unless there were complications in subsequent labors which fortunately have been very rare. In our technic, the vaginal aspects of the bladder are completely exposed by separating the fascia underlying the anterior wall well to the side after which the redundant tissue is excised. The bladder is then separated from the uterine wall as high up as seems necessary. It is then held up out of the way while a new base is made by fixation sutures. These sutures run through the anterior margins of the bases of the broad ligaments and include the uterus so as to form a firm shelf upon which the bladder now rests. We do not emphasize the importance of the so-called bladder pillars since they are so often attenuated. Broad surfaces of the cut edges of the fascia and vagina are now united by a double layer of chromic sutures. The success of the operation depends upon a proper elevation of the bladder and wide flaps to ensure a broad and firm fascial union. Postoperatively, the patient is catheterized frequently. We feel that much depends upon frequent catheterizations since we thus avoid straining the sutures from the impact of a half distended bladder during vomiting.

In this discussion we have not considered cervical repairs which form no part of this symposium. If the cervix is hypertrophied we resect it by Martin's method before doing the cystocele, aiming to avoid amputation if it is possible.

Rectoceles are treated in a manner similar to the cystocele, the repair consisting in uniting wide fascial flaps. The importance of secondary perineal repair has been exaggerated in the past. A repair of the perineum does not aid the cure of a high rectocele. If repair work is limited to the perineum, the operator will be chagrined to see a rectocele redevelop above the line of his closure. Our incision, therefore, in high rectocele, runs in the midline as far up as the cervix. The tissues are separated with dissecting scissors, making wide flaps of fascia on each side. This completely exposes the anterior portion of the rectum. If an enterocele is present it is closed after dissecting and cutting away the capsule of the hernia, after which a rectopexy suture is inserted through the margins of the uterosacral ligament bases and the outer margins of the rectovaginal fascia so as to elevate portions of the rectum in each bite. The lower end of the incision is closed to restore the central tendon of the perineum in the manner developed by Ward and Watkins. Here again the fascia is united in layers, placing the sutures fairly closely together. The repair is essentially fascial, and muscles are not isolated for the closure. Our results are excellent, only one recurrence in fifty-two complete prolapse cases after five



years standing, this being a woman of seventy-two, in whom there was need for haste in operating. The unions, however, are not invariably as firm as in cystocele because it is impossible to keep the rectum empty. If there is too much resection the vagina is unduly narrowed. Starvation observations have shown that feces accumulate in the ampulla of the rectum even as late as eight days after the last meal. Therefore, it seems impossible to diminish the down-thrust of feces upon sutures even though the patient be placed upon a nonresidue diet. Every now and then some suture will wear through. The bowels are kept locked for five or six days, and are opened from above after two oil enemas have been given. We know our operative results because of a follow-up which brings 90 per cent of these cases back for repeated observation.

#### DISCUSSION

FRANK C. AINLEY, M.D. (1136 West Sixth Street, Los Angeles)—Doctor Lynch has presented his view concerning the problem of prolapse in young women, its etiology, its prevention, and its cure, in a concise and convincing manner. Cystocele and rectocele are forms of hernia and by keeping this point in mind we are able better to handle the problem. The general body tone which depends upon good health is of the greatest importance, and the general hygiene and building up of a patient is too often neglected, not only after confinement, but even more so before confinement, as well as before and after secondary repair work.

Lynch properly emphasizes the importance of avoiding voluntary bearing down attempts at delivery before the cervix is completely dilated, and also the advantage of doing an immediate restoration of the perineal body in layers, immediately after delivery with the aid of episiotomy. His results in cases of delivery following operation are unusually good, and one is pleased to note that this notwithstanding, he points out the wisdom of seeking in certain cases the control of symptoms by treatment, rather than operation, until after the patient has passed the child-bearing period. This latter course can be followed to the distinct advantage of the patient in many cases.

TITIAN COFFEY, M.D. (Medical Office Building, Los Angeles)—Prevention as stressed by Doctor Lynch appears to me the keynote of this paper. Intelligent and proper care of our patients during delivery and follow-up observation after confinement are absolute essentials if we are to avoid the conditions under discussion.

A sufficiently deep median episiotomy done at the proper time is a tremendous factor, saving the integrity of the perineum and preventing pushing down and overstretching of the anterior vaginal wall. When the latter becomes edematous and begins to protrude before the caput appears we may rest assured the tissues are unduly stretching and great damage is being done before our eyes. Proper episiotomy, thereby gaining additional room below, promptly relieves this strain and hastens delivery.

Another important factor is the ironing out of the perineal floor as advocated by Potter before his version and extraction, preceding all forceps deliveries. Irreparable damage is done the pelvic tissues by dragging the occiput forcibly over them before proper preparation.

Too many women unfortunately resume their household duties and are on their feet too soon after confinement. This again is a factor by causing weight and increased congestion of tissues below par. Hence the advantage of exercises as a preventive measure, such as knee-chest position and kangaroo walk, thereby decreasing the pelvic congestion, relieving weight and toning the tissues, also the wearing of a properly fitting supporting belt for at least two months following confinement.

Pessary wearing is a valuable asset in aiding us until the tissues have recovered their tone. The future comfort of the patient and much operative work will be avoided if Lynch's salient points be kept in mind.

In regard to the question of operative relief each patient presents an individual problem and the choice and kind of operation must be adapted to the findings. Theoretically it is best to advise operation for immediate relief with the danger of subsequent breakdown of our repair in following confinement, though Lynch reports little danger from this, or to make the patient as comfortable as possible with palliative measures until she has brought into the world the number of children she desires? Dependent upon the degree of discomfort suffered by the patient, this question is probably best decided by herself. Personally, I believe, unless the discomfort is very great the patient should have her operative work done toward the close of the child-bearing period.

I quite agree with Lynch that mere correction of rectocele or cystocele will not give satisfactory results, but must be supplemented by some sort of suspension of the uterus.

ALFRED BAKER SPALDING, M.D., (Stanford Hospital, San Francisco)—I agree with Doctor Lynch that young women should receive a full year's treatment after confinement if they wish to avoid pathological changes in the pelvic fascia. The pelvic fascia is merely condensations of loose connective tissue around the blood vessels and nerves which run to the uterus or a thickening of the muscle layer overlying the pelvic muscles. Retroversion of the uterus with cystocele and rectocele is not due entirely to lacerations at the time of labor but depend upon the tissue changes that occur in the pelvic fascia following labor.

I cannot agree with Lynch in what he has to say in regard to recurrences. My experience with clinic patients at Stanford University, over a period of thirteen years, which covers the operative relief of symptoms of something over six hundred patients, convinces me that there is a small recurrence in conditions of prolapse of the uterus regardless of the type of operation done, due primarily to poor fascia. There is about 5 per cent recurrence in regard to cystocele and 13 per cent recurrence in regard to rectocele.

Personally, I prefer to operate upon patients after the child-bearing period and believe that the majority of patients can be well cared for by judicious office treatments until the period of atrophy begins.

DOCTOR LYNCH (closing)—I neglected to state in the paper that our ideas contained therein were developed from a follow-up study of 290 operations for retrodisplacements with vaginal repair, 210 cases of retrodisplacement with removal of one tube and ovary and vaginal repairs, 125 marked vaginal relaxations with cervical injuries, all in women of the child-bearing age, and of sixty-eight complete procidentias, postmenopausal, all operated between 1917 and 1922, a total of 693 operated cases, all followed for periods ranging from a minimum of one and a maximum of eight years. This series represents a follow-up of 90 per cent of all the cases of the same types that were operated in the university hospital in that period.

**Protein Therapy in Eye Infections**—H. F. Shorney (Medical Journal, Australia, February 13, 1926, p. 177), discusses the use of protein therapy in eye diseases, and advocates the use of cow's milk injections, especially in the treatment of gonorrheal ophthalmia. After boiling the milk for not more than five minutes the injection is made deeply into the gluteal region in doses of 2 cc. for a new-born infant, 5 cc. for a child of 6, 8 cc. for a child of 10, 10 cc. over that age, and 15 cc. for adults. Shorney has found the routine use of milk injections in perforating wounds of the globe very useful in preventing the occurrence of sympathetic ophthalmia, and excellent results were obtained in acute inflammations of any part of the uveal tract. He states that an injection given early in wound infection after cataract extraction may avert a pan-ophthalmitis, but that it is inadvisable to give an injection as a prophylactic after every cataract operation with a view to anticipating infection, because the resulting reaction is not good for elderly people. The injections should be given with the usual aseptic precautions. Boiling for more than five minutes coagulates and changes the albumin, interfering with the resulting reaction.—Abstract, Service Bull., Metz Laboratories.

## SOME OBSERVATIONS ON THE INFLUENCE OF BOWEL IRRITATION OVER THE GASTRIC AND DUODENAL REGION

By R. M. CLARKE \*

*Bowel irritation exerts an influence on the stomach, pylorus and duodenum (the ulcer-bearing area).*

*Gastric irritation is thereby greatly increased, due to pylorospasm, secretion retention, loss of duodenal regurgitation, and the usual rest period.*

*"Ulcer symptoms" can result from these conditions without ulcer.*

*Careful bowel management should therefore be a part of the treatment of all gastric cases, especially those with ulcer or ulcer symptoms.*

*It is reasonable to suspect that bowel irritation, such as habitual catharsis or enemas, colitis, fermentation, amebiasis, etc., can cause peptic ulcer.*

DISCUSSION by *Walter Wessels, Los Angeles; Eugene S. Kilgore, San Francisco; John V. Barrow, Los Angeles.*

IT has long been recognized that irritations and inflammations in the bowels, especially the large bowel, frequently refer their pain and other symptoms to various places in the upper parts of the tract. There are very few, if any instances, of symptoms being referred to a lower portion of the tract. An excellent example of the upward tendency is the effect of irritations in the descending colon in increasing the reverse peristalsis from Cannon's ring back over the cecum.

The influence of bowel irritation over gastric and duodenal functions is another indication of the upward tendency of reflexes in the tract. The tendency of this bowel reflex is to tighten the pylorus; the influence may come from any part of the colon, but rises mainly, I believe, from the ileocecal region. There has been, and still is, a great tendency to diagnose as gastric diseases symptoms that are only reflex evidence of bowel irritation. Our only means of getting away from this is a better knowledge of the physiology of the tract.

### PYLOROSPASM

This tendency of the bowel reflex to tighten the pylorus entails many evils. The emptying time of the stomach is one of the first things to suffer. The distress after eating, from which so many bowel trouble patients suffer, is in quite a measure due to this pylorospasm and inability of the stomach to start its emptying time as it should. In other words, the intragastric pressure is increased by a tightening pylorus and an increasing gastric wave. The presence of a barium residue in the stomach after four or five hours, in the absence of obvious ulcer, gall bladder disease, and other local pathology, is in itself highly suggestive of bowel irritation. The power of this reflex from bowel irritation over the pylorus, is indeed astonishing when we consider the length of time it takes some stomachs to empty themselves in its presence.

### LOSS OF RESTING PERIOD

A general physiological requirement of active tissues and organs is periodical rest, that is, sleep for

the brain, diastole for the heart. The stomach is no exception to the rule and normally has its periods of rest. It receives a meal, secretes, digests, empties itself and rests. This rest is attained first, by becoming empty, thus affording relief from food stimulation; secondly, by duodenal regurgitation of alkaline material into the stomach, thus checking its motor and secretory activity and enforcing rest.

### SECRETION RETENTION

There is thus, not only, (1) a delayed emptying time; (2) the loss of the rest period; (3) the prevention of duodenal regurgitation, but we have also (4) a secretion retention. There has been, and still is, a good deal of discussion about hyperchlorhydria and hypersecretion, but their existence is very doubtful. The peptic glands secrete hydrochloride acid in a given amount and rather constantly, but it piles up in amount if the outlet of the stomach is not functioning as it should. Therefore, pylorospasm produced by the bowel reflex has a great influence over the amount of secretion present, its length of stay in the stomach and its ability to irritate this area. For further study of the influence of duodenal regurgitation over the chemistry and function of the human stomach, the reader is referred to the literature on the subject which is very interesting. Spencer, Meyer, Reh fuss, Hawk, Carlson, Baldyreff, and others, provide us with studies of great importance.

### ULCER SYMPTOMS WITHOUT ULCER

For years it has been taught that there is a "classical syndrome" for ulcer. That is, pain when the stomach is empty, food and alkali relief, and returning pain with an empty stomach. These symptoms may be present with ulcer, but evidence is constantly increasing to show that they frequently exist without ulcer. In other words, with pylorospasm and secretion retention present, it is easy to understand how there can be such irritations when the stomach is empty, and also that pain will be present that can be relieved by alkalies. This is fact—does often happen. These patients find great relief by management that quiets the bowel irritation. Such management relaxes the pylorus and permits duodenal regurgitation once more, thus re-establishing the gastric period of rest, and relieving the irritation to this ulcer-bearing region.

### DOES THIS BOWEL REFLEX CAUSE PEPTIC ULCER?

Bowel irritation can upset the entire tract. I believe its effect is felt mainly in the ulcer-bearing area, and that we have every reason to look upon it with grave suspicion as a prolific cause of peptic ulcer. It seems easier to understand how this irritation can exist in the stomach than in the duodenum. However, the function of the duodenum is also upset and its nerve supply comes from the same sources as that of the gastric mucosa. It is therefore subject to the same influences.

We have other examples of ulceration caused reflexly, and that, too, in the gastrointestinal tract. For instance, the simple herpes labiales occur with bad conditions lower in the tract. These break down into ulcers on the lips that may become very deep. Why is it not just as easy to think that the reflex from bad bowel conditions, that we now know does

\* R. Manning Clarke (319 Hollingsworth Building, Los Angeles). M. D. George Washington University. Practice limited to Medicine. Hospital connections: White Memorial and Los Angeles General Hospitals and Glendale Sanitarium. Appointments: Professor of Clinical Medicine (Gastro-Enterology), College of Medical Evangelists. Publications: "Treatment of Constipation," California State Journal of Medicine, January, 1923.



affect the ulcer-bearing area so powerfully, can cause the peptic ulcer? Certainly this is not an unreasonable suspicion.

By careful inquiry the majority of such patients will supply a history of prolonged bowel trouble and it is rare to find a peptic ulcer patient with nothing wrong in the bowel.

Autopsy experiences have taught us that some ulcers heal even without treatment. May not this be due to some happy change in bowel conditions? As explained earlier in this paper patients suffering from "ulcer symptoms," but without demonstrable ulcer, are often relieved by proper bowel management. On account of this I now add to my usual ulcer treatment a very careful bowel supervision in all patients with ulcer.

We had on our service last year thirty-seven ulcer cases. *There was not one patient in the list who gave normal bowel history. They ranged all the way from severe constipation to looseness, with five or six mushy stools a day.*

I submit the following case history as sufficiently illustrating the point in question:

Mr. C—, age 39 years, insurance agent, was referred last year by Doctor M—, with a tentative diagnosis of peptic ulcer. He gave a history of constipation beginning at 18 years of age, which had continued with an increasing severity ever since. He had been largely dependent upon cathartics during that time, using everything from epsom salts to glycerine suppositories.

After seventeen years of this, at 35 years of age, ulcer symptoms began (that is, same kind of distress for which he came on my service, pain on empty stomach, food and alkali relief, with returning pain on an empty stomach). Over a period of two years he was given Meltzer-Lyon technique for drainage of gall bladder, with no relief.

At the end of this two-year period, at 37 years of age, he consulted a surgeon, who did an appendectomy and a cholecystectomy, and gave the definite report that there was no ulcer or other pathology of any kind. The appendix was removed because "the abdomen was opened," and the gall bladder was removed because "it was thickened."

Following this surgery, constipation was worse than ever, and the symptoms from which he sought relief were unrelieved. One year later he came under my care, with the same symptoms and a large ulcer that was easily demonstrated under the x-ray.

Here we have a man with severe intestinal irritation existing over a period of nineteen years. After seventeen years he began "ulcer symptoms," but had no ulcer, because we have the report of a reliable surgeon who examined his stomach by exploratory incision only two years before he came on our service, and two years after starting ulcer symptoms. Then at the end of this two years we find a large ulcer easily visualized. I believe it is a fair suspicion that bowel irritation caused first, "ulcer symptoms," and two years later ulcer, and that bowel management in time might have prevented the ulcer. This patient is fully relieved and has gained thirty-five pounds in weight, and a large part of his care and treatment is and has been good bowel management.

#### DISCUSSION

WALTER WESSELS, M. D. (1200 South Alvarado Street, Los Angeles)—The fact that pylorospasm results from pathological lesions elsewhere in the abdomen is evident. Whether it can be produced by colonic irritation and inflammation may be questioned.

The term irritation is so elusive that one is at a loss as to its real meaning, and unless colitis or enteritis is meant when inflammation is spoken of, this term is also indefinite. Surely, atonic constipation, for example, is not associated with a demonstrable inflammation.

The reflex pylorospasm accompanying obstipation or impaction, for instance, ceases as soon as the mechanical obstruction is relieved. It stops long before the irritation

and inflammation, if they are present at all, could subside. This would not be true were they the cause.

Then, too, pure nervous phenomena without any irritation or inflammation whatever produce pylorospasm, eyestrain, migraine, fright.

The hypothesis that Clark advances regarding these bowel conditions producing pylorospasm with secretion retention and lack of rest period and in this way responsible for ulcer is, it seems to me, untenable. It would be extremely easy to produce ulcers experimentally on animals by sewing up the rectum. This has been tried but without success.

The analogy of herpes habialis being produced by gastrointestinal irritation is not convincing, for herpes labialis is more frequently associated with respiratory infection than with gastrointestinal disturbances. Furthermore, evidence is not lacking that disease of the nervous system plays a part in this condition as it does in herpes zoster.

Autopsy records do not show the association peptic ulcer with grave colonic lesions, not to speak of irritations.

The great number of chronically constipated individuals without gastric symptoms, as well as the number of peptic ulcers with normal bowels, would incline one to differ with the author as to his conclusions.

His case history is of extreme interest, but not conclusive. We can never be certain that an ulcer is present from x-ray evidence alone, as I am sure many of us have had occasion to observe when the patient was operated upon.

Ulcers heal spontaneously, it is true, or at least ulcer symptoms stop. I have seen symptoms cease when no attention whatever was given to the colon because there was no occasion to do so.

I believe ulcers are due to infective emboli carried to the wall of the stomach or duodenum. Experimental evidence is at hand to prove this. Some such evidence should be forthcoming to establish Clarke's interesting hypothesis. Would it not be well to withhold judgment until experimental evidence supports deductive theories?

EUGENE S. KILGORE, M. D. (490 Post Street, San Francisco)—The stomach has long been recognized as a spokesman for lower parts of the digestive tract and there is no doubt of Doctor Clarke's contention that at least its motor functions are often disturbed by the presence of pathological changes below. The most interesting part of Clarke's contribution, however, is his addition of another theory on the old perplexing question of peptic ulcer etiology. His idea of bowel irritation disturbing gastric physiology with resulting retention, lack of rest period, etc., and thereby causing or at least favoring gastric ulcer formation is quite conceivable, but when applied to the more common duodenal ulcer his reasoning is not clear. And in neither case could the suggestion be considered seriously without a good deal of properly controlled investigative data. One would like to ask, for example, (1) what is the comparative frequency of constipation, etc., in the ulcer group and in a similar group of nonulcer patients; (2) if this comparison seemed to show a significant positive correlation between ulcer and bowel symptoms, do the bowel symptoms antedate the ulcer symptoms with sufficient frequency to suggest the bowel disorder as the primary cause and not the effect (e.g., effect of the patient's dietary efforts to relieve his ulcer)?; (3) what proportion of necropsies of ulcer subjects show bowel pathology, and how does this record compare with nonulcer subjects? The data secured from the patients' histories would require special precautions to exclude subconscious bias on the part of the one who took the histories and who later sorted and graded them for bowel irregularities. And, if all these difficulties were overcome, and a significant correlation between ulcer and bowel irregularity could be demonstrated, one would still have to inquire whether any causal relation existed between the two conditions or whether both might be due to some other etiologic factor.

JOHN V. BARROW, M. D. (2007 Wilshire Boulevard, Los Angeles)—In my observations of the pathological physiology of the abdominal viscera, I am convinced that Doctor Clarke is dealing with a helpful and true clinical principle. Very frequently we see patients in whom the

stomach and duodenum are the points of complaint, while the terminal findings are those of a lower bowel condition. I am satisfied that gastric and duodenal ulcers recover much more rapidly if a goodly part of the treatment is directed toward the colon, and there is at least some reason to suspect that lower bowel irritation may bear a part in the etiology in stomach and duodenal ulcers.

DOCTOR CLARKE (closing)—The etiology of peptic ulcer is a very complex matter and I think all will agree that the last word has not been said upon the subject. *I do not wish to be understood as putting forward a new theory as to the cause of ulcer, thus supplanting all previous theories.* I do, however, wish to say emphatically that I believe the influence of bowel irritation over the ulcer-bearing area is a very harmful one and may cause ulcer. To say the least it creates a condition splendidly adapted to assist the formation of ulcer by embolism or any other means. It is conceivable that embolism could occur in a normal stomach and the resultant ulceration heal spontaneously, causing no trouble. With a pylorospasm present and secretion retention, with loss of the rest period and duodenal regurgitation, the chance of ulceration healing spontaneously is greatly reduced. *In view of this I feel that attention to bad bowel conditions should form a part of all ulcer treatments.*

I notice Doctor Wessels' doubts if pylorospasm can be caused by colon irritation. There are many writers of prominence to cite as proof that others believe and teach it. Charles G. Stockton, writing in "Oxford Loose-Leaf Medicine," emphatically states it in several places. If the doctor wishes the volume and page, I would cite volume III, page 269, under the subhead of "Sympathetic reactions between the stomach, colon and small intestine."

I was impressed very differently than Doctor Wessels by reading autopsy records. I felt they did show the association of peptic ulcer and colon lesions. It is also hard for me to understand the doctor's statement that "atonic constipation is not associated with demonstrable inflammation." It is my understanding that an atonic colon is only a later stage of what was at one time a spastic condition.

I am much interested in the three questions propounded by Doctor Kilgore. These questions I have asked myself for sometime, and I have stated in this paper what I think the answer is. In number one, Doctor Kilgore limits it to constipation, but I think there is often more irritation in conditions of loose frequent stools than with constipation. In going over my records there is an antedating bowel history in a surprisingly large number. I would be more than human if I could claim entire freedom from bias—subconscious or otherwise. Be that as it may, I feel that most all the ulcer cases I see have an antedating bowel story to tell.

Doctor Kilgore rightly suggests that there may be a causal factor underlying both the ulcer and bowel condition, with which I fully agree. I can easily conceive of an endocrine dyscrasia doing such a thing. It may be also that some day it will be shown exactly what that causal factor is.

I have greatly enjoyed the discussion and am pleased to note that Doctor Barrow recognizes some worth in the point I am trying to make in this paper. There are many points that could be taken up in rebuttal, but wishing to keep myself in proper space and proportion I will not attempt anything further.

The medical profession by and large, the world over, repudiates Freud, his theory of the neuroses, and his system of therapy. Psychologists have always denied him, and now artists, litterateurs and critics are beginning to line up with them. To leave this statement unqualified would do Freud an injustice and the public an unfairness. . . . Were they asked whether they subscribed to some of his doctrines it is likely that more than half of them would reply, "I do." . . . Freud has taken a few sick souls and after studying them he has reconstructed a sick world, a horrible world in which no one save a few mystics and monsters want to live.—Joseph Collins, The Dearborn Independent, August 21, 1926.

## SINUS INFECTION IN CHILDREN

By FRANCIS M. SHOOK \*

DISCUSSION by E. S. Budge, Los Angeles; J. A. Connell, Riverside; Rexford Hoobler, Oakland; Clifford Sweet, Oakland.

THIS consideration of sinusitis in children is limited to a series of patients with maxillary antrum infections, varying in ages from four years to twelve which were cared for during the past two years.

Symptomatology—general. The most common picture is that of a child below par physically, with no sharply defined symptoms indicative of the precise location of the chronic infection. This may be illustrated by patient R. B., age 8 years. For several years this child had been under medical supervision. The child was subject to recurrent febrile attacks of unknown origin. These attacks would last from a few days to several weeks, and were marked by prostration and fever. The child was below par physically, and the repeated toxemia had produced cardiac symptoms which indicated myocardial involvement. Repeated physical examinations were negative. On nasal examination a diagnosis of probable chronic low-grade maxillary antrum infection was made because of the constant presence in the floor of the nose of mucopurulent secretion. The diagnosis was confirmed by operative intervention. The after-treatment cleared up the antrum infection, and the results have been very striking. The child has become a normal one as regards physical condition, the febrile attacks have ceased and the damaged cardiac muscle has resumed normal function. Another child, A. B., has been under the supervision of a pediatrician for one year, during which time there were only a few short periods of normal temperature. The abnormal temperature could be explained by a recurrent pyelitis, the etiology of which was finally traced to a chronic low-grade maxillary antrum infection. The diagnosis for this patient was made without any difficulty. The child was a mouth-breather, although the tonsils and adenoids had been removed. The nose was filled with a mucoid discharge, which could be removed in large quantity by a suction pump. The treatment consisted of surgical drainage of the maxillary antrums followed by prolonged after-treatment by lavage of the maxillary antrums. The results have been very good. There has been a continued improvement in the general condition, and the child's temperature has remained normal except during one mild attack of pyelitis and one throat infection. A different phase of this subject may be illustrated by the following: Patient W. C., age 6 years. For the past year this child's mother made the following observations: (1) There seemed to be present a constant "cold" of the nasal variety. (2) The child would awaken suddenly nearly every night and awaken the household with a violent coughing spell. (3) Although in fair health the

\* Francis Marion Shook (Medical Building, Oakland, California). M. D. University of Michigan. Appointments: Chief Ear, Nose and Throat Department of Merritt Baby hospitals, Oakland. Practice limited to ear, nose and throat diseases. Hospital connections: Merritt, Baby, and Providence hospitals of Oakland. Publications: Several articles in the Laryngoscope including Brain Abscess; Petrous Pyramid Infection; Submucous Resection.



child was not quite up to standard. Careful general examination by the family pediatrician at different intervals showed moderate quantities of mucopurulent discharge on the floor of the nose, with some crusting about the anterior tips of the middle turbinates. Surgical drainage of the maxillary antrums was performed and the usual after-treatment instituted. There was marked improvement and within a few days the night spasms of coughing had ceased. The antrum infection subsided with lavage performed twice a week. The history of K. O. is an illustration of the type of maxillary antrum infection in children which simulates a sensitization. Age at time of original examination, 6 years. Symptomatology—repeated attacks of coryza and bronchitis. There was present impaired nasal respiration, which was very pronounced at night. The tonsils and adenoids were removed, with some improvement. The patient's postnasal adenoids were removed twice at intervals of about six months with some improvement each time. After it was definitely established that there would be no recurrence of the postnasal adenoid, nasal examination showed mucopurulent secretion on the floor of the nose, with slight crusting on the anterior tips of the middle turbinates. This child was then kept under observation for about two years, during which time repeated general and special examinations were made, and climatic, dietetic and local treatment instituted. The symptomatology remained about the same. There was frequent sneezing spells, recurrent attacks of bronchitis and constant mucopurulent discharge. The child's general condition remained below par, and she belonged to the group known as the "nervous" child. Surgical drainage of the maxillary antrums was performed about a year ago with very good results. Since then there has been about 80 per cent improvement in the symptoms.

Another interesting history is that of the patient V. G. At the age of  $3\frac{1}{2}$  years the patient had an upper respiratory tract infection which was followed by a thick, greenish mucopurulent nasal discharge. The maxillary antrums were irrigated at this time under a general anesthetic of short duration. The child remained in fairly good condition for about nine months, when there was another upper respiratory tract infection with a complicating middle-ear abscess. The child's health was then fair for about six months, when there was a febrile attack of unknown origin accompanied by convulsions. The temperature rose to 105.6 degrees, and some months afterward there was a similar attack which did not subside completely. The child's temperature rose from 100 to 101 degrees nearly every day, and the general physical condition was poor. A diagnosis of maxillary antrum infection was made on account of the presence of mucopurulent secretion of varying amounts in the nares on repeated examinations. In November, 1924, surgical drainage of the maxillary antrums was performed. The results were not very good, and in January, 1925, another general anesthetic was given and the surgical work repeated. Since then the antrums have been irrigated twice weekly. At first there was present in the antrums a large quantity of mucopurulent discharge. At present this has disappeared, and there

has been an astonishing improvement in the child's condition. The temperature is normal, weight and strength have been regained. The after-treatment of patients with these infections is sometimes tedious and prolonged, and results are not apparent for varying lengths of time from a few weeks to several months after surgical intervention. When these probabilities have been explained to the parents they have all given hearty co-operation. Gastrointestinal symptoms may be present, as the following history illustrates:

Patient, age  $6\frac{1}{2}$  years. About one and one-half years ago there began recurrent attacks of nausea and vomiting accompanied occasionally with a rise of temperature. There was present in the vomits greenish yellow mucus. The tonsils and adenoids were removed with some benefit. On general examination no reason could be found for the symptoms. There was slight impairment of nasal respiration and the child's mother reported frequent "colds." The child was subnormal physically. Hygienic and dietetic treatment was instituted with some benefit. Nasal examination showed a considerable quantity of the usual mucopurulent secretion on the floor of the nares, with crusting on the anterior tips of the middle turbinates. A diagnosis of low-grade maxillary antrum infection was made and operation performed with the usual after-treatment. There has been a very marked improvement in the patient's general condition. She now sleeps well when formerly she was very restless; the recurrent gastrointestinal symptoms have ceased. She is now gaining in weight rapidly, as compared with a former slow gain, and the antrum infection is clearing up gradually.

The allergic type may be illustrated by the following history: Patient H. I., age 6 years. Since birth nasal respiration has been impaired. At  $3\frac{1}{2}$  years of age the child's tonsils and adenoids were removed with very slight improvement. Frequent physical examinations were made and the patient's diet and general condition supervised by the family pediatrician. Three years ago the child developed asthma; the attacks were worse during the winter months and were not influenced favorably by general measures. In November, 1924, nasal examination showed considerable mucopurulent secretion on the floor of the nose. This could be removed by the suction pump in surprisingly large quantity. The child's maxillary antrums were drained surgically and the usual after-treatment instituted. There was a large quantity of secretion present at each irrigation. During January, 1925, the drainage openings in the antrums were re-opened, and this was repeated again in March. Improvement in this patient has been about 90 per cent. The nasal respiration is now fair, the asthmatic attacks have been absent for five months and the child is developing normally. An analysis of the remaining twelve patients shows only slight variations from the results noted above.

In order of occurrence the following symptoms have been present: (1) Impaired nasal respiration. (2) Nasal examination usually shows varying amounts of mucopurulent secretion. (3) There is

usually present general symptomatology of absorption from local infection.

*Treatment*—The treatment which is giving the best results is as follows: (1) Intranasal drainage of the maxillary antrums is performed under a short general anesthetic, usually nitrous oxide. (2) The maxillary antrums are kept as clean as possible by irrigation with normal salt solution. (3) Careful supervision of the patient's general condition is made by the pediatrician.

#### DISCUSSION

E. S. BUDGE, M. D. (Chapman Building, Los Angeles)—The subject of sinusitis in children is of great importance not only to the rhinologist and pediatrician, but more so to those in general practice. Comparatively few cases complaining of the symptoms outlined in his paper come directly to the specialist.

Many symptoms resulting from infection of the facial paranasal sinuses, especially the maxillary in young children are treated as general conditions. These patients come to the specialist only as a last resort when all other treatment has long since failed to restore the child to health.

Many times when a rhinologist is consulted he, too, often does not give enough attention to the sinuses. It is not generally realized that sinus infection is of equal importance to that of tonsils both in its direct and indirect effect; in the production of rheumatic fever, chorea, pyelitis, nephritis, anemia, and malnutrition. While in infants the symptoms may be wholly referable to the gastrointestinal tract, to say nothing of the many cases of fever of unknown origin.

In my opinion sinus involvement in children is much more common than is often suspected. Like all other processes of infection the vast majority heal spontaneously, but many not until a great deal of damage has been done in the way of edema and hypertrophy of the mucous membrane of the nose as a result of irritating discharge causing narrowing or obstruction to the nares, further hindering sinus drainage. After all proper drainage will cure all cases, this being our only object when operation is instituted.

As a pool of mucus in the floor of the nose is suggestive of sinus involvement, we may add to the strength of this finding by clearing the nose thoroughly with suction or swab. Then have the patient hold the head forward for ten minutes; if quantities of mucus reappear it is fairly certain of sinus. Because inflammatory conditions of the infundibulum and mucous membrane do not cause an immediate reappearance, it must come from a place of retention, and, of course, from the anterior series if draining over the lower turbinate. I have found it convenient for observation to shrink the spongy tissue of the turbinate by touching the anterior tips with cotton probe moistened with ephedrin sulphate 5 per cent.

Such local symptoms as cough of a persistent character, bronchial findings, pharyngeal and laryngeal irritations, accompanied by mucus in the nose may mean sinus infection, even in the absence of general symptoms.

A history of typhoid fever, influenza, measles or other infectious diseases is of importance as a causative factor; such history should direct our attention to the sinuses, always remembering that the absence of mucus and crusts does not exclude sinus.

J. A. CONNELL, M. D. (Riverside, California)—If we note carefully the repeated and prolonged colds which children suffer, with a continuous discharge of pus or mucus from the nose, we will find that many of them are due to infections of the sinuses.

It has been found that the antra are the first sinuses to become infected in children, in the majority of cases.

It is seldom there is complete blocking of all of the openings of the sinuses, because the sinus openings are larger proportionately than they are in adults. This is also a good reason for the more persistent discharge from the nose in children.

The only cause for dental infection would be trauma or death of the pulp in the upper first molars, which erupt

at the age of 6 years. Due to the lack of dental attention the pulp may become involved before the age of 12 years, and cause the same type of antral infection that we find in adults.

Local examination is very important for antral disease before opening the antrum, and we must consider the following symptoms: (1) the amount, character and location of the discharge from the nose; (2) the degree of tenderness over the antrum and surrounding parts; (3) transillumination; (4) x-ray; (5) exploratory puncture.

I think it is seldom necessary to open the antra if we would take a set of x-ray plates after appropriate medical treatment has been instituted, then we would probably find that the trouble had cleared up.

Although there has been a tendency of a great many rhinologists to puncture the antra at frequent intervals to wash them out, if we give the proper medical treatment first along the same line as given adults usually it would be unnecessary to open the antrum.

As long as the normal osteum is open sufficient drainage takes place, but there is always a risk that a permanent plug will form which will necessitate opening the antra.

The puncture has this advantage: If any discharge is found in the antrum it can be washed out through the needle, unless the infectious material is so thick it will not go through. It may be a serum, seropus or pus.

Most of the cases referred to the rhinologist for diagnosis are of the chronic form, and therefore should be opened and washed out, especially if the tonsils and adenoids have been removed with only slight improvement.

A continued irritation of the membranes in the antral cavities may cause granulations to form, causing the patient to have a recurrence of the acute infection.

Children are not so apt to have a recurrence of antrum infection as adults, due to the large openings of the antrum into the nose.

REXFORD HOOBLER, M. D. (Medical Building, Oakland, California)—Up to the last few years it has been the general opinion that the maxillary sinuses in children are not sufficiently developed prior to puberty to give rise to infections. This opinion, however, is erroneous, as the maxillary sinuses are well developed at the beginning of the second dentition and a considerable cavity with outlets exists as soon as the child has obtained its temporary teeth. From this time on a child is subject to maxillary sinusitis.

The first time I realized that this condition could occur in young children the infection was caused by a dentist breaking through a carious tooth into the antrum. Since then I have hesitated to use nasal irrigation in acute nasal infections for fear of carrying the infection into the antrum. Many physicians prescribe snuffing of saline solution from a cup or palm of the hand for colds which seems to me also a dangerous procedure. I should like to hear from Doctor Shook what technique or conditions he feels is conducive to the development of sinusitis in children.

Following antrum puncture I have found children to be nervous, irritable, and anemic. They have no appetite and frequently complain of headache and nausea. Tonics such as iron, arsenic, and nuxvomica are valuable. It frequently is necessary to give five small meals a day instead of three large ones. Hygiene of the oral and pharyngeal cavities is important. It is very often advisable to keep the child in bed even though he has no increased temperature. With nutritional improvement and good drainage the infection usually disappears in a few weeks.

The type of infection is not common in children, and Doctor Shook's experience with such a large group should enable those of us working with children to diagnose this condition more intelligently in the future.

CLIFFORD SWEET, M. D. (242 Moss Avenue, Oakland, California)—Maxillary antrum infections are very common in children of all ages. They occur as a part of every acute upper respiratory infection of more than very mild grade and short duration. The profuse mucopurulent secretion caused by the common cold arises from the antrums; no other portion of the nasal structures can produce it. If the infection is not prolonged because of its own virulence or because of the poor resistance of



the child complete healing takes place after a short time with no structural change within the antrums. However, if a very virulent infectious process gains entrance to the antrums, or if reinfection occur at frequent intervals, permanent damage is done; a pathological condition is begun and a chronic sinusitis results. This in turn is too often followed by impaired general health, atrophic rhinitis, infection of the other paranasal sinuses, as they develop and any or all of the disease processes which are caused by chronic focal infection. Good health, therefore, is the primary prophylactic measure. An excellent state of nutrition, which is possible only with ample food, sufficient vitamins and exposure naked in the direct rays of the sun, means fewer respiratory infections and these of shorter duration.

The infection, when it has become subacute or even when chronic, may often be cleared up by improving the child's general condition. When doubt exists as to the necessity of surgical interference the general measures, rest, a carefully arranged diet with cod liver oil, heliotherapy or the quartz lamp, and in selected cases an autogenous respiratory vaccine should be given fair trial. In deciding whether or not surgery should be advised, the appearance of the anterior portion of the middle turbinate seems to be the best guide. If the mucous membrane of this area shows a beginning atrophic rhinitis, surgery is indicated. After atrophic rhinitis has made its appearance I have not seen a spontaneous recovery.

Shook is calling our attention to a most important and heretofore neglected seat of infection in children. I have referred him many cases with gratifying results. This work promises an opportunity to prevent many children from struggling through years of impaired health—to arrive at adult life with chronic sinus infections, the treatment of which is at present far from satisfactory.

## COSMETIC SURGERY OF THE THYROID GLAND UNDER LOCAL ANESTHESIA †

By CHARLES CALVIN TIFFIN \*

UNLIKE most other regions of the body, the scar following thyroid surgery must be placed on trial before the critical observation of the patient, the patient's friends, and others. As surgeons we have probably not shown the proper interest in the cosmetic effects of our work but rather in the therapeutic results of the operation, in consequence of which a great number of women in particular have refused operation, preferring to carry the goiter through life rather than have what they call "a large ugly scar." This idea has been helped along to a large extent by friends, so-called, who have failed to realize the great service to be rendered the patient in terms of better health and extended life.

It is unnecessary to say that the scar should be no objection to whatever is necessary to save life, for we are supposed to be scientific men with one great object in view—the restoration of good health and life conservation. With this idea in mind we have gone on through several generations of thyroid surgery, making the same large scar as our great

forebears in this interesting field. Of course, we are not to be severely criticized, for in all scientific research the refinements and niceties always have followed the somewhat cruder earlier work.

Public opinion largely accepts the fact that goiter operations in the hands of skilled operators offer little hazard to the life of the individual, especially if the patient is cared for early. Let us demonstrate, then, that not only can we do a thyroidectomy safely, but that we can do it so as to make the scar almost invisible. In order to succeed in this we must remember, first, that all scars are produced by the direct injury of the operation or to violence or roughness in handling the tissues, and, second, to our tendency to overlook the great principle that all tissues must be placed in such a position during and in closing the operation that a normal-looking neck will be the result. It is not enough simply to close the wound superficially so that it appears smooth and nice in appearance.

Important questions for the surgeon to ask himself are:

How will this neck look in six months or a year?

Have I carefully studied the contour of the neck to be operated on, considering its present deformity; just how much gland is to come out, and just where and how long the incision is to be; and have I a very sharp knife with which to make the incision?

Am I going to remember that this is done under a local anesthetic, and that my patient, while not suffering pain, will not enjoy the least bit of roughness in sponging or in handling the tissues, and am I really aware of the fact that the principal cause of shock is lack of gentleness during the operation?

Have I carefully dissected the skin of the lower flap as well as the upper, knowing that if the upper flap is freed and the lower not freed the result will be an overhanging scar?

Have I been careless under the surface; have I neatly and carefully resected the thyroid gland, or have I left irregular masses here and there?

Have I cut muscles that should not have been cut or have I interfered with the nerve supply of the sternomastoid muscles which will be certain to cause atrophy?

Have I cleared the trachea of all thyroid tissue so that there will be no regrowth of the gland in the midline with its resultant deformity?

Have I made a nice straight-line incision in the fascia so that a neat smooth scar will follow here, or have I bruised the fascial edges, making likely a slough with deformity in midline?

Have I ligated the superior poles of the thyroid gland high enough to prevent regrowth in this locality, and in ligating the superior pole have I been careful not to carry the suture into the subcuticular tissue, thus producing an ugly-looking depression in this region?

Have I a perfectly dry clean field after the operation is finished, or am I leaving in bits of tissue, clots or small bleeders as an inspiration to deformity and adhesions, and have I carefully closed and sutured all of the small cut muscles?

Have I placed my twenty-four-hour drain through the angles of my incision by means of a puncture wound through the sternocleidomastoid muscle, or

† Read before the 1926 Annual Session of the Utah Medical Association, Salt Lake City.

\* Charles Calvin Tiffin (532-35 Stimson Building, Seattle). M. D. University of Colorado, 1911. Graduate study: Internship Minnequa Hospital, Pueblo, Colorado, 1911-13; eastern clinics and Europe, 1925. Previous honors: Corner King County, Seattle, 1917-21; first president Seattle Academy of Surgery. Hospital connections: Providence Hospital, Seattle. Scientific organizations: King County Medical Society, Washington State Medical Society; A. M. A., Seattle Academy of Surgery. Practice limited to Goiter since 1922. Publications: "The Early Diagnosis and Treatment of Toxic Goiter," *Colorado Med.*, 1924; "Exophthalmic Goiter Before and After Operation," *Chicago M. Rec.*, 1925; "Some Experience in Local Anesthesia in Goiter Surgery," *Northwest Med.*, 1925; Numerous other papers.

have I put it in midline with a certainty of midline skin attachment and puckering later on?

Have I sutured the skin too much or do I realize that perfect apposition and rest is what I want rather than pressure and constriction from too much suturing, especially in the loose skin of the neck?

Am I thoroughly appreciative of the fact that the drain should be removed at the earliest possible moment, varying from twelve to twenty-four hours, and that part of the skin clips can be taken out the second day and the remainder the third morning?

Lastly, am I appreciative of the fact that active and passive massage should be begun early and kept up for several weeks to prevent slight adhesions with their deformities?

I believe that local anesthesia is the ideal anesthesia in thyroid surgery because it helps to answer these questions satisfactorily to myself and patients. In injecting a local anesthetic, start, of course, with a very small needle, telling the patient to expect a small pin-prick sensation. I think it is best to make the first injection one inch below the sternal notch, working upward from this point. It is not necessary to enter through this same point, but it is necessary always to enter through an anesthetized area. Infiltrate in the subcuticular tissue and not into the skin, and after this is well infiltrated inject deeply on a level with the superior poles of the gland, forcing in about 10 cc. Be sure to stay outside of the trachea and medially to the large vessels, and be sure to draw on the piston of the syringe before you inject, to be sure you are not in the blood vessel.

Make your incision much smaller than you think you need. Two to two and one-half inches is long enough for all but the occasional large goiter, and even the large cystic goiter can be removed through very small openings in the skin, for it is very elastic. After making the skin incision at least one inch out under at the ends and well under the lower and upper flaps, then with a special tenaculum or small forceps fasten the upper flap out of the way by means of attachment to the sterile side of the face protector of the patient.

In working through small openings such as this, a double spreading retractor is no help and really only a handicap, as it makes the edges of the skin tight and prevents the freeing of the superior poles. After the fascia has been incised and the gland is in view, pass No. 2 catgut tractor on a needle through the more conspicuous lobe, and then with this tractor bring this lobe up into the wound. Now inject about 5 cc. of one-half per cent novocaine into the lobe, especially the superior pole. Be certain you are through the anterior fascia and small muscles of the lobe, and as you free it insert more tractor sutures and the lobe will be elevated from its bed. While doing this catch and tie the lateral venous circulation. When the superior pole is in position and free, clamp off with two forceps for double protection and with a sharp knife free the superior pole.

From now on your work is easy. If the patient feels pain at any time inject novocaine at the point of pain. Remember the sternomastoid muscles are sensitive, so inject them too if the patient complains

as your assistant starts gently retracting on the side you are working on. Do your resecting from the medial side as much as possible, first freeing the trachea by incising down to it in midline. This resecting from the medial side on a level with the trachea insures protection of the recurrent laryngeal. But as you approach this delicate region place your forceps and test out the patient's voice before you resect in a given area and you will not be sorry later. After the lobe is out tie off bleeders very carefully. Here you appreciate the two forceps on the superior pole, for if the suture breaks in tying you still have one forcep in place. After removing one lobe and securing perfect hemostasis remove the other in like manner. Have the patient cough several times after the resection is over. If there are poorly secured ties or temporarily placed clots this will dislodge them and you can further ligate and feel certain you will have no postoperative hemorrhage. Remember to use novocaine whenever you need it to secure perfect freedom from pain, and advise the patient to inform you at the slightest pain. Make a puncture wound for a small flexible tube through the sternomastoid muscle and close the fascia with interrupted plain gut. I do not use subcuticular sutures for the skin, simply closing with clips. Remove the drain in from twelve to twenty-four hours, part of the clips the second morning and the rest the third morning. Massage early and free the skin from any possible adhesions, having the patient assist at this and keep it up until the skin is freely movable and normal in appearance.

I have long ago ceased to use adrenalin with the one-half per cent novocaine. Consequently I no longer encounter giddiness and faintness. I also find that my anesthetic continues to be as satisfactory as it was when I used adrenalin. I do use morphin preparatory to all thyroid surgery by giving one-eighth of a grain one and one-fourth hours and an additional one-quarter grain thirty minutes before the operation. The first hypodermic quiets the patient and takes away her sensitiveness, and the last takes care of the ordinary discomforts of a hot operating room and enforced quiet of one position on the table.

Goiter patients are often very ill and their comfort is constantly catered to. The nurse sitting at the head of the table can slip her hand under the patient's neck and back of the head, ice can be given and the patient's mind is occupied by quiet questions from time to time, first, to help time to pass and, second, to show pressure on the recurrent laryngeal.

Remember that the cardiovascular system and the viscera are great sufferers from prolonged toxic or exophthalmic goiter and that our problem is to find a means of removing this goiter with a minimum of irritation and shock. We must interfere as little as possible with the diet, avoid hemorrhage and lighten the load on the circulation and kidneys.

The experienced surgeon readily appreciates that there is a distinct difference between goiter and other major surgery. There is no other type of operation which gives the severe reactions that often occur after thyroidectomy.

Call to memory some of your goiter patients. If



you have been unfortunate in one of these the third or fourth day after an operation, think this point over, "why did you lose the patient and why usually before the fourth day?" Is it because the patient is so much undernourished and run down that any additional load often results in infection which kills her? Plummer says that infection kills most of these patients. It is my experience and belief that the symptoms during the reaction clearly prove that infection has much to do with the high mortality in this type of surgery. Certainly there is no type that can cause the surgeon more worry for two or three days after the operation than thyroidectomy.

What are some of the advantages of local anesthesia? It enables one to feed the patient right up to the time of operation and to have practically no interruption following it. It gives the operator co-operation from the patient during the operation, making it possible for her to warn the operator when the recurrent laryngeal nerve is in danger or has been pinched. Many times I have been very close to this nerve, and have discovered my proximity to it by the disturbed breathing or changed voice of the patient. Again, a patient who is awake can co-operate with the surgeon by coughing, following the removal of the gland. This will dislodge a clot or poorly secured tie, and it will do this while the field is under the observation of the surgeon. Again, when one becomes thoroughly conversant with local anesthesia he has a tendency toward developing rapid technique because of the continual desire to get the patient off of the table as quickly as possible, a matter of great importance in this type of surgery. Shock, which is one of the important things not to be overlooked, is severe in direct proportion to the amount of trauma and anesthetic. We are extra careful to avoid shock when the patient is awake. It is true our mortality today, especially from exophthalmic goiter, has been much lowered through preparatory use of iodine, and we are losing very few patients. Certainly it should be our endeavor to lower our mortality still more.

#### CONCLUSIONS

1. Local anesthesia favors increased speed and efficiency of the operator and enforces gentleness in operations on the thyroid.
2. Small faint scars may be secured by: (a) short clean-cut incision; (b) free dissection of both the upper and lower flaps and laterally from the angles of the incision; (c) clean dissection and careful ligations; (d) small drain at angle instead of midline drain; (e) early removal of drain and skin clips; and (f) early and continued massage to keep skin from adhering in any place.

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The essence of good manners, generosity of spirit, a sense of style and a sense of proportion, these are the essence of all art. They are the essence of the art of life. It is a tragic comment on our scurrying industrial society—and on the intellectual life it generates—that that most gracious of all arts is coming into disrepute.—Irwin Edman, *The Bookman*, August, 1926.

## ADVANTAGES OF MEDICAL SOCIAL SERVICE IN ORTHOPEDIC SURGERY †

By GEORGE J. MCCHESENEY \*

MEDICAL Social Service is indispensable in the special field of orthopedic surgery. This is because orthopedic surgery is the surgery of chronic long-drawn-out diseases such as infantile paralysis, tuberculosis of bones and joints, spastic paraplegia, chronic arthritis and congenital deformities such as club-feet, dislocated hips, and cleft palate, in which services are required over a period of years, during which the medical social worker must maintain a proper contact between the surgeon and the patient. Essential contact consists not only in routine follow-up letters sent when the patient is overdue for the next visit, but in a periodic check-up of the changing financial status and social and housing conditions of the family. A child properly cared for at the beginning of a long course of treatment for tubercular hip or spine may later suffer from improper food and lodging when the father is out of work, or the family becomes larger as years pass by. Here is where steady visits and interviews by the social worker, with parents or patient, becomes so necessary, and is more often acceptable and, of course, more economical than too much attention by the doctor. A very helpful worker in these circumstances is the specially trained visiting nurse who can do simple dressings, inspect braces, shoes, plaster casts, recognize the kind of co-operation that is provided at home, the need of convalescent care in the country, etc., and report findings, actions, and changes of status to the physician.

An even more important service of the medical social worker is the assistance she can give in maintaining the morale of the patient and family. The encouraging ultimate prognosis that the orthopedist usually can give patients needs constant reiteration and amplification as time wears, and feasible results are slow in materializing. The surgeon, I fear, is apt to be impatient, often hurried, in his explanation for the general tediousness of things, and here the medical social worker can supplement her advice with additional details, information, and encouragement.

An important duty of social workers is the searching out and arranging for the treatment of hitherto unrecognized, missed or neglected patients requiring orthopedic care. Such patients are getting fewer with the many charitable agencies ferreting them out, but new ones are constantly being found and the search must continue as long as we have the ignorant, the poor, and tenement housing.

Another field of useful endeavor, the exact opposite of the foregoing, and in which the possibilities are but beginning to be recognized, is the social care and supervision after the period of active medical and hospital treatment is finished. These children,

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† Read before the 1926 Annual Meeting of the California Association of Medical Social Workers.

\* George J. McChesney (520 Fitzhugh Building, San Francisco). M. D. University of California, 1900; A. B. University of California, 1896. Present hospital connections: Orthopedic Surgeon, Children's Hospital and St. Luke's Hospital. Practice limited to Orthopedic Surgery.

often handicapped by years of disease, are behind their fellows in school and need assistance and encouragement through the years up to maturity and a wage-earning status.

Lowman, in his Orthopedic Hospital School in Los Angeles, has recognized this need of bridging the gap between the periods of convalescence and wage earning by the formation of alumni clubs of former patients who have reunions once or twice a year, when they visit the hospital, have entertainments, etc. This gives them a chance to see and encourage patients undergoing treatment similar to their own, and also provides opportunity for the medical social worker to ascertain how the former patients are progressing and to aid them in getting jobs, keeping them off the streets, and to arrange for further treatment if necessary. In other words, this is a continuance of social care and supervision for years longer than formerly attempted, done under the guise of alumni associations, similar to the collegiate ones. The individual does not suspect the real purpose, which is to continue contact, with moral and material support after the medical is of secondary importance, and to continue until the person is a reasonable wage-earner, able to begin repaying his debt to the public which has hitherto provided for him. The economic value of this prolonged supervision is evident, for it bridges the long gap, usually several years between the end of medical treatment and the beginning of wage earning, and unless this is well and properly done the patient loses much, and the state is not reimbursed to the extent to which it is entitled. Many times possible pauperism and its heavy load upon the state may be prevented by this far-reaching after care.

This is but an outline of the many diverse duties of the medical social worker, duties requiring in the highest degree the qualities of common sense, tact, patience, and vision, by a group of health workers, often overworked, always underpaid. But in the larger and finer sense let them keep in mind George Francis Adams' lines: "He climbs highest who lifts another up."

Psychology is not yet a full-fledged science, but it has made important and far-reaching advances in the past few years. The behaviorists, the psychoanalysts, and the industrial psychologists are laying the basis for profound changes in the technic of group control. Where is this new knowledge being principally utilized at the present time? In the offices of advertising agencies. Today as never before the man with something to sell knows how to turn into cash three fundamental aspects of human nature: the desire to attract the opposite sex, the desire to exert power over one's neighbors, the desire to get safely and honorably to heaven. In brief, the higher salesmanship has captured applied psychology, horse, foot, and guns. And the very knowledge which might render us significant help is turned against us to create new wants, new desires, new forms of waste. (Some psychologist should write, as he starves, a monograph entitled: How to Build up Sales Resistance. No one will read it now, but in a hundred years he will have a statue in the market-place.)—Stuart Chase, Harper's, September.

# HOW MEN DIE IN PRISON

By LEO L. STANLEY\*

(From the California State Prison, San Quentin)

THERE always is much public curiosity about prisons and prisoners. The prison is the home of tragedy. Tragedy marks the crime, frequently attends the criminal throughout his life, and it is a tragic ending when he finds the iron doors locked behind him. Many tragedies, often fatal ones, are enacted within the prison walls.

How do men die in prison? This is a question which is worthy of a critical analysis. In the California State Prison at San Quentin, data for the past twenty-three years is available. The accompanying table, No. 1, shows the cause of death and the date, together with the prison population for each of these years. Chart I shows the prison population

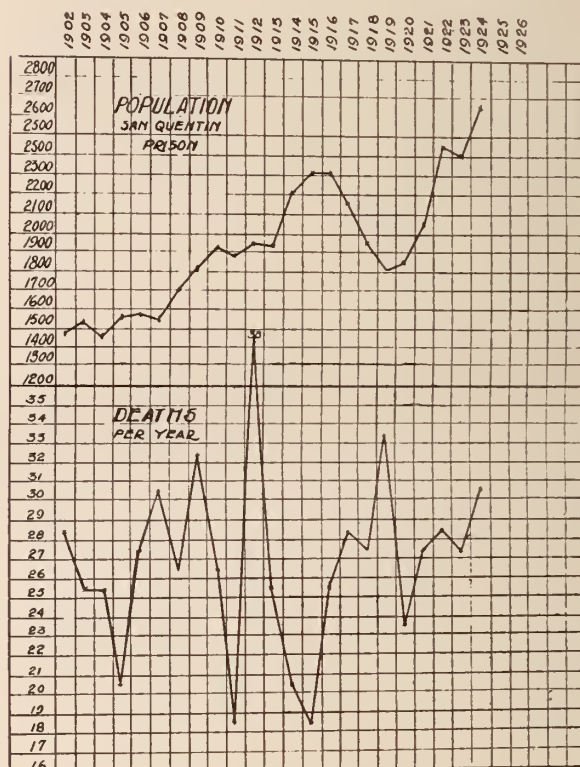


CHART I

by graph; Chart II shows the death rate per thousand from all causes, as well as the rate of death from tuberculosis and executions; Chart III shows the deaths per year by suicide; and Chart IV shows the number of deaths each year from tuberculosis and executions.

From Chart I it is seen that there has been a gradual increase of population in San Quentin from 1450 in 1902 to over 2600 in 1924. In 1916 the population began to decrease from 2230 until it reached 1800 in 1919. This was due to the fact that large numbers of young men were in the army. At

\* Leo L. Stanley (618 Fifth Avenue, San Rafael, California). M. D. Cooper Medical College, 1912; B. S., Stanford University, 1907. Graduate study: Lane Hospital, 1912-13. Previous honors and services: Resident Surgeon, California State Prison, San Quentin, 1913-26. Practice: Limited to Surgery, Endocrinology.



the end of the war it increased, and has climbed rather briskly since. Chart II shows that although the prison population has increased, the death rate has decreased. This is accounted for by the fact that better sanitary and hospital facilities have been provided and methods of treating disease improved.

Every man who enters this prison is vaccinated

against typhoid fever, which in consequence has been almost completely eliminated as a cause of death.

Better facilities for the housing of the tuberculous have been provided with the result that the death

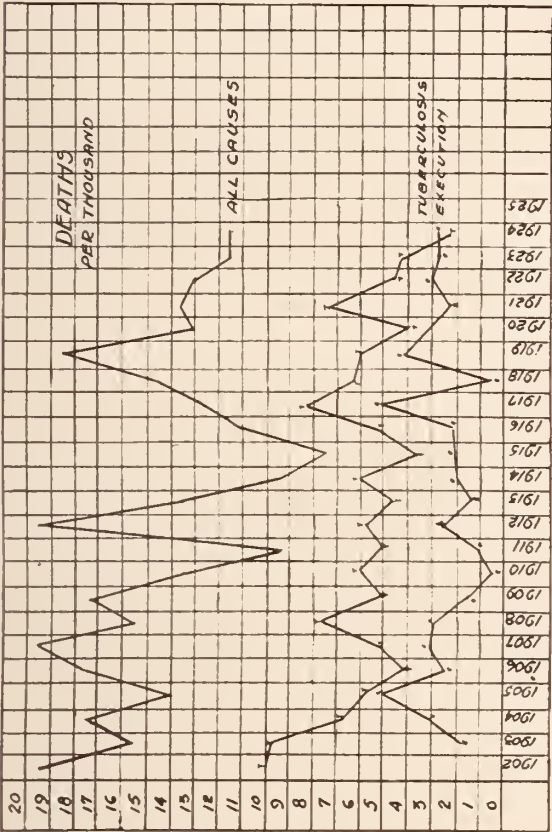


CHART II

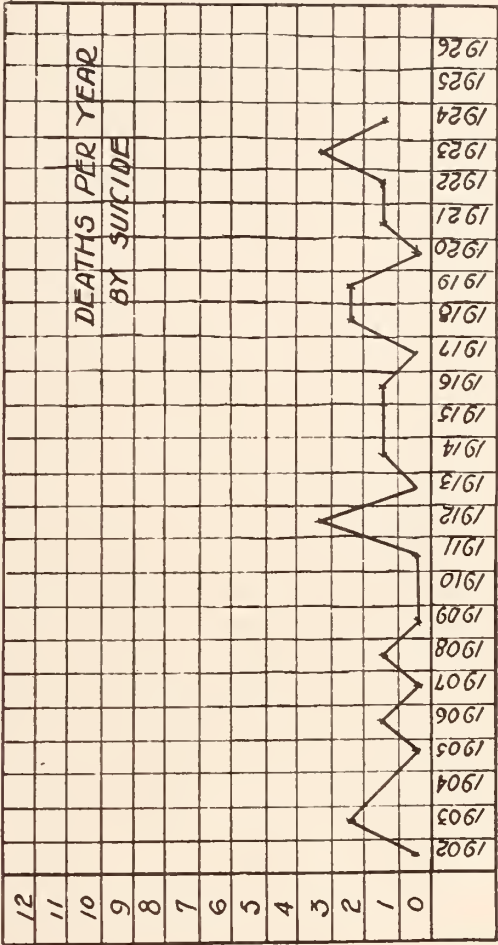


CHART III

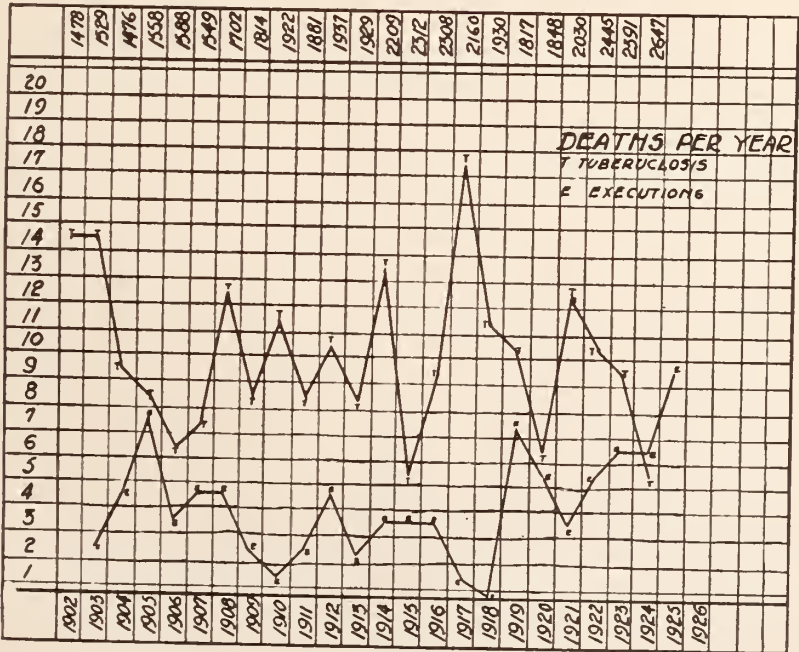


CHART IV







rate from this disease has been cut from ten per thousand in 1902 to two per thousand in 1924. The rate was greatly increased in 1916 and 1917 because all the tuberculous prisoners from the state prison at Folsom were transferred to San Quentin for treatment. Many of these men were in bad condition and died soon after the transfer.

Each prisoner on entering San Quentin is given a thorough physical examination, and at this time cases of tuberculosis are discovered and the patient immediately hospitalized before he can spread the infection. Next after tuberculosis as a cause of death come legal executions. In 1902 executions by hanging were concentrated in San Quentin instead of being done by the sheriffs in the various counties. The largest number occurring in any year has been seven, while in the year 1918 there was none.

The largest number of suicides in any year was three. The most common method of suicide was by jumping from a height, although suicide by hanging, drowning, and cutting of the throat are recorded. One man saturated his clothing with kerosene and set fire to himself.

The great influenza epidemic of 1918 carried off only three. Very strict hospitalization orders were enforced, and all prisoners upon the first symptoms were immediately sent to bed.

The murders committed in prison amount to slightly less than two each year. Their causes are many. Jealousy, race hatred, escapes, and fits of passion, frequently causes, slightly intensified by surroundings, which might prompt the same act on the outside. It seems, however, that there is more of tragedy in the deaths which occur inside the walls than those outside.

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**Glycosuria, in itself, can no longer be regarded as a sign of a single disease.** It appears more rational to think of glycosuria as a symptom such as jaundice, angina, or headache, the cause of which must be ascertained in each case. The diagnosis of renal glycosuria should not be arrived at hastily, since unquestionable instances of this condition are uncommon and few cases have been followed for a sufficient period to be certain of the final outcome. An elevation of the renal threshold, so that hyperglycemia exists without glycosuria, occurs occasionally in diabetics who have been treated with insulin. Present information would indicate that a constant elevation of the threshold is a disadvantage to the organism because of the excessive work continuously thrown upon the internal secretion of the pancreas. The four important groups of nondiabetic glycosurias associated with an elevated blood sugar content are the alimentary, neurogenic, toxic, and the endocrine. The endocrine group at the present time represents a large and poorly understood one which is associated with a disturbance in the function of the glands of internal secretion. Perhaps the most outstanding example is the diminished carbohydrate tolerance of hyperthyroidism as shown by the presence of glycosuria and an abnormal blood sugar curve. The glycosurias accompanying pituitary and adrenal disturbances need further experimental study. True pancreatic diabetes offers especial difficulty in the diagnosis primarily in the three following groups of cases: (1) asymptomatic glycosuria; (2) patients complaining of the complications of diabetes only; (3) patients first seen in coma.—J. Lab. and Clin. Med.

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An investigation committee in England has found that only 15 to 20 per cent of drug addicts treated achieve a lasting cure.

## THE TECHNIQUE OF ADMINISTRATION OF SODIUM TETRAIODOPHENOLPHTHALEIN IN CHOLECYSTOGRAPHY

By GARNETT CHENEY \*

(From the Department of Medicine, Stanford  
Medical School)

**D**URING the last two years many comprehensive articles have been written on the use of tetraiodophenolphthalein for gall bladder visualization. Its value has been proved beyond question, and cholecystography now ranks as one of the most important recent advances in diagnostic procedures. The technique of the dye administration has varied considerably, and the outlining of a routine method that has proven satisfactory should contribute to a more rapid increase in general usage of this test.

In Stanford medical department we have used sodium tetraiodophenolphthalein exclusively for the last eight months, and have given it to private as well as to clinic patients. Two methods of administration have been utilized: giving the dye in pill form by mouth, and in solution by intravenous injection. The pills have been given to the outpatients, while those receiving it by vein have been required to enter the hospital. Two hundred and seventy-three patients have taken the pills, 122 the injection.

In the oral method stearin-coated five-grain pills are given, each patient taking one pill per ten pounds of body weight. After a light dinner and at about 6 p. m. all the pills are swallowed, the patient being instructed to take plenty of water with them, to lie down and to take nothing more by mouth. Outpatients having a complete gastrointestinal x-ray series routinely take tetraiodophenolphthalein pills the evening of the first day of the examination. The first gall bladder visualization plate is taken at the time of the twenty-four-hour gastrointestinal examination, on the morning of the second day. A certain number of patients vomit the pills, which makes further procedure with the test impracticable. In accordance with other observers (1), (2), (3), (4), I have found cholecystography by means of the pills unreliable, except for the visualization of the normal gall bladder.

The sodium salt of tetraiodophenolphthalein as prepared by the Eastman Kodak Company of Rochester, New York, is used for intravenous injection. This is a light blue crystalline compound with a molecular weight of 682 grams, which is 61 per cent iodine by weight. It deteriorates on exposure to the light. A solution is prepared by dissolving three grams of the dye in 50 cc. of distilled water, and autoclaving for twenty minutes. Sterilization may

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\* Garnett Cheney (Lane Hospital, San Francisco). M. D. Harvard, 1923; A. B. University of California, 1920. Graduate study: University of Vienna, Pathology six months, 1923; Clinical Assistant Westminster Hospital and St. George's Hospital, London, fifteen months, 1924 and 1925. Previous honors: U. S. Army, 1918. Present hospital connections: Senior Medical Intern, Lane Hospital, Medical Resident beginning September 1, 1926. Scientific organizations: San Francisco County Medical Society, California Medical Association, and American Medical Association (application pending). Practice limited to Medicine. Publications: "Does the Administration of the Anterior Lobe of the Hypophysis to the Tadpole Produce an Effect Similar to that Obtained by Thyroid Feeding?" (Endocrinology, Vol. V, No. 4, July, 1921); "Sporadic Trichinosis with Extreme Hypotension" (J. A. M. A., April 3, 1926, Vol. 86, p. 1004).



also be accomplished by placing the flask in a boiling-water bath for twenty minutes.

There are two methods of giving intravenous tetraiodophenolphthalein: one by syringe, the other by gravity. The former has not been used in this series, as previous experience makes me feel there is more likelihood of local reaction. The latter has proved satisfactory. The apparatus used is sterilized. A salvarsan cylinder with long rubber connection at the bottom is set up on a stand. A two-way Kaufman-Luer syringe with intravenous needle is attached to the tubing. Normal saline at body temperature is allowed to flow through the tube until all air is expelled. The solution of dye is filtered through medium filter paper into a sterile bottle, heated to body temperature and added to about 10 cc. of normal saline already in the cylinder. The use of the two-way Luer facilitates the injection in that a direct flow is established as soon as the needle is inserted. Special care is exercised in making sure the needle is well in the vein. Five to ten minutes are allowed for the injection, and the dye is washed out of the apparatus with about 25 cc. of normal saline at body temperature.

In 122 patients receiving intravenous injections of tetraiodophenolphthalein there were but four general reactions.\* Only one of these was of a serious nature. Twenty minutes after receiving the dye the patient had a chill with rapid weak pulse, pallor and fall in blood pressure, but responded rapidly to adrenalin subcutaneously. One other patient had a mild chill ten minutes afterward. It is worthy of note that both these patients had their reactions very soon after injection. Two patients suffered nausea and vomiting two to three hours after administration of the dye, but as both had had nausea and vomiting previously these symptoms may not have been due to the dye. Only two local reactions have occurred with the gravity method. These consisted of local discoloration with slightly painful thrombosis, but no induration or sloughing. Hot compresses relieved the pain.

The intravenous dye may be given on the first day of the gastrointestinal x-ray series, or independently. At first the injections were given about 10 p. m., nothing being allowed after supper until noon of the next day, the routine orders for the oral and intravenous methods being the same. X-ray plates were taken at 8 and at 11 a. m. on the second day, and a third following a full lunch. It has been found simpler to inject the dye at 5 p. m., the patient going without supper but receiving fluids up until midnight. On the next day the first x-ray plate is taken about 8 a. m. on a fasting stomach, a breakfast rich in fats is given and a second x-ray taken at 11 a. m. The series of two plates, one at fifteen hours, the other at eighteen hours after injection, has been found sufficient to picture the ability of the gall bladder to concentrate and to empty following a meal. X-ray exposures are made, using a Buckey diaphragm in order to get the most constant intensity of shadow, and the degree of dye concentration is interpreted by the method of Newell, (5). Flat plates of the gall bladder region are taken routinely preceding cholecystography. Close co-operation with the

x-ray department has been most valuable in accurate interpretation of the findings.

Twenty patients receiving dye intravenously subsequently came to operation, and in only two, or 10 per cent, was diagnosis by cholecystography in error. One diseased gall bladder was visualized, and one normal gall bladder was not.

#### CONCLUSIONS

1. The present technique of oral administration of tetraiodophenolphthalein is unsatisfactory.

2. The intravenous injection of tetraiodophenolphthalein as outlined has proven simple and efficient, and general reactions occurred in only 3 per cent of 122 cases.

3. Cholecystography by the intravenous method should be used as a diagnostic procedure in cases suspected of having gall bladder disease.

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\* Since the writing of this article several severe reactions occurred following the intravenous use of a supply of dye which had not been kept free from exposure to light. The exact cause of these reactions has not yet been worked out. A new supply of dye is giving satisfactory results.

The medical profession of France confronts at present two attitudes: (1) that of the Union des syndicats médicaux, a quasi-official organization, accustomed to treat with the public authorities and which has indicated a willingness to discuss the question of fees with the Caisses d'assurances and to submit a minimum schedule, and (2) that of a certain number of *syndicats* which refuse to enter into any discussion with the *caisses* and which declare that to do so would be tantamount to allowing themselves to be reduced to a wretched condition of slavery, an example of which is furnished by many of the physicians of Alsace-Lorraine, where this form of social insurance has been in force for the last twenty years or more. In Alsace-Lorraine these, *syndicats* assert, the *caisses* have reduced a good part of the physicians to mere wage-earners, poorly paid and overworked. Even hospitals in many instances belong to or are under the control of the *caisses*, which furnish care of all sorts to their clientele without reference to the physicians. The medical profession of Alsace-Lorraine is thus divided into two groups, one harshly or even rudely treated by the *caisses* and merely able to exist, and another group which is independent of the *caisses* but which is compelled to renounce entirely all claims to patients among the working classes, which, in certain regions, constitute the chief source of income.—J. A. M. A., August 14, 1926.

But a little difficulty presents itself. The emergence of science has delegated to a twilight zone the gods and myths invoked by the old-time medicine men. Science is on the throne. Softly; what does the commonalty know about science? Only enough not to blow out the gas, and to read scientific supplements in the Sunday newspapers. Good. Science, for the mass of men, is only a new mysticism; a shift from elves in glades to elves in molecules and air waves and germ plasms.—Stuart Chase, Harper's, September.

## AN ANALYSIS OF HEART SOUNDS AND MURMURS BY GRAPHIC MEANS †

By J. J. SAMPSON AND R. L. MCCALLA \*

VISUAL records of heart sounds and murmurs have been in use for many years. Their value in certain "fields" has been previously indicated, namely, (1) the accurate study of the time relations of certain audible events to each other and to other recorded indices of the cardiac cycle, thus enabling a better understanding of the factors causing these sounds; (2) the production of permanent records for further study, or comparison, in the instance of cases presenting changing clinical characteristics; and (3) the recognition of certain diagnostic criteria of abnormalities in visual sound records that are inaudible, because of such factors as a rapid rate.

A review of the instruments previously used for this purpose is too extensive for the scope of this paper. It suffices to state that both direct and indirect mechanical methods of transmitting the sound vibrations to a re-

cording mechanism have been employed, also certain optical methods, notably those of Hess,<sup>1</sup> the method employed by Einthoven,<sup>2</sup> using the Einthoven string galvanometer to record currents induced in a simple transformer by a microphone, and the more recent method of Einthoven and Hoogerwerf.<sup>3</sup> Excellent reviews of the subject are given by Weiss<sup>4</sup> and Barker,<sup>5</sup> and by Lewis,<sup>6</sup> in both of his articles on heart sounds and in his textbook, Mechanism and

†From the Department of Medicine, Division of Cardiology, University of California Medical School, San Francisco.

\* John J. Sampson (291 Geary Street, San Francisco). M.D. Harvard University, 1920; A.B. and M.A. University of California. Graduate study: Internship Boston Psychopathic Hospital; House officer, Massachusetts General Hospital; assistant in Pathology, University of California; West Medical Research assistant, Massachusetts General Hospital; Hooper Foundation, University of California. Hospital connections: Assistant visiting physician, University of California Hospital and Cardiac Clinic; medical adjunct, Mount Zion Hospital, San Francisco. Scientific organizations: San Francisco County Medical Society, C. M. A., A. M. A., California Academy of Medicine, American Heart Association. Appointments: Instructor of Medicine, University of California. Practice limited to Internal Medicine. Publications: "Onset of Function in Fetal Pancreas," Journ. Biol. Chem., 1919; "Macrophages in Peripheral Blood," Arch. Int. Med., 1923; "Germanium Dioxide as a Remedy for Anemia" (with Dr. George R. Minot), Boston Med. and Surg. Journ., 1923; "Fragility of Leukocytes," Arch. Int. Med., 1924; "Photographic Film in Electrocardiograph Plate Cameras," A. M. A., 1925; "Phonocardiography of Human Fetus" (with Drs. R. S. McCalla and W. J. Kerr), Amer. Heart Journal, 1926.

Randolph L. McCalla (University of California Hospital, San Francisco). M.D. Columbia University, New York, 1920; A.B. Georgetown University, 1916. Graduate study: Internship Saint Agnes Hospital, Baltimore; resident San Francisco Hospital, University of California Hospital. Hospital connections: Resident physician University of California Hospital. Scientific organizations: San Francisco County Medical Society, C. M. A., A. M. A. Appointments: Instructor in Medicine, University of California Medical School. Practice limited to Internal Medicine. Publications: "Phonocardiography of the Human Fetus" (on press).

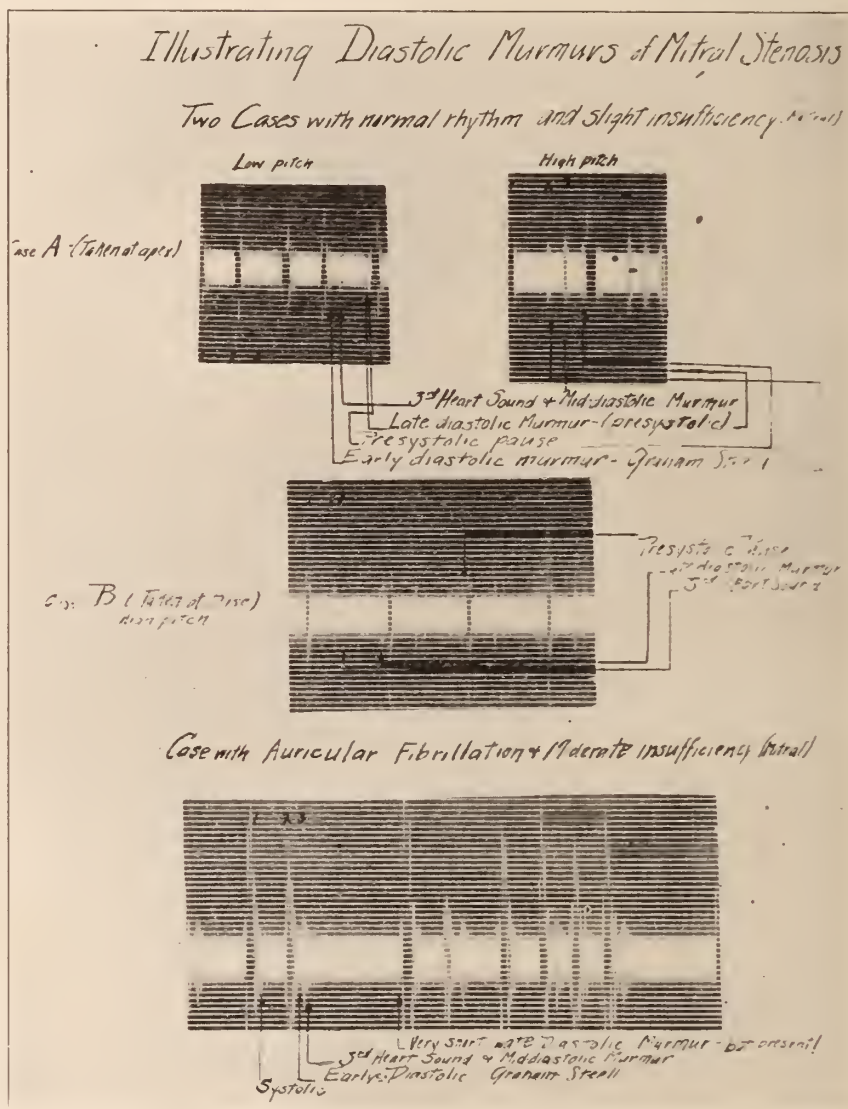


Fig. 1—Phonocardiographic records of three cases of mitral stenosis illustrating the characteristic findings both with normal rhythm and with auricular fibrillation. Camera running at constant speed.

Graphic Registration of the Heart Beat.<sup>8</sup> The records apparently showing the best definition of sound vibration with least amount of aberration are those produced by the method of Einthoven. Using his technique, Einthoven (himself),<sup>9</sup> Eyster,<sup>10</sup> and also Kahn,<sup>11</sup> Lewis,<sup>6</sup> Bull,<sup>12</sup> and Fahr,<sup>13</sup> have contributed many accurate studies of the time of onset, duration, and crescendo or decrescendo character of the normal and pathological sounds and murmurs, and described variations with rate, respiration, posture, and exercise. Certain of the detailed studies are mentioned below.



The limitation of this and other previous methods for fine analyses, is adequately stated by Lewis in that, in general, nothing beyond clearly audible sounds are reproduced, and low-pitched murmurs which the ear may differentiate cannot ordinarily be recorded. This he stated in apparent contradiction of the fact that he observed at various times recorded frequencies of 125-660 per second.

Perfect phonocardiograms by the above method are difficult to obtain because the friction of the recording bell sets up extraneous vibrations.

Our work reveals two more possibilities for clinical use as well as for scientific interest of sound records: (1) recording sounds too faint or blurred

hand-movement vibrations; the amplification of the received vibrations by the recently perfected electron tube methods, using three tubes of the 201-2 D type; and the use of varying condenser and coils with inductances and capacities which allow the filtering out of different bands of frequencies. The amplified and possibly filtered vibrations are then received on the Einthoven string galvanometer and recorded photographically.

The instrument employed by us, was a Western Electric model perfected from the earlier models used by Gamble and Replogle,<sup>14</sup> Gamble,<sup>15</sup> Cabot and Dodge.<sup>16</sup> It was equipped with Low Pass filters of 130, 400, 650, and 1100 vibrations per second.

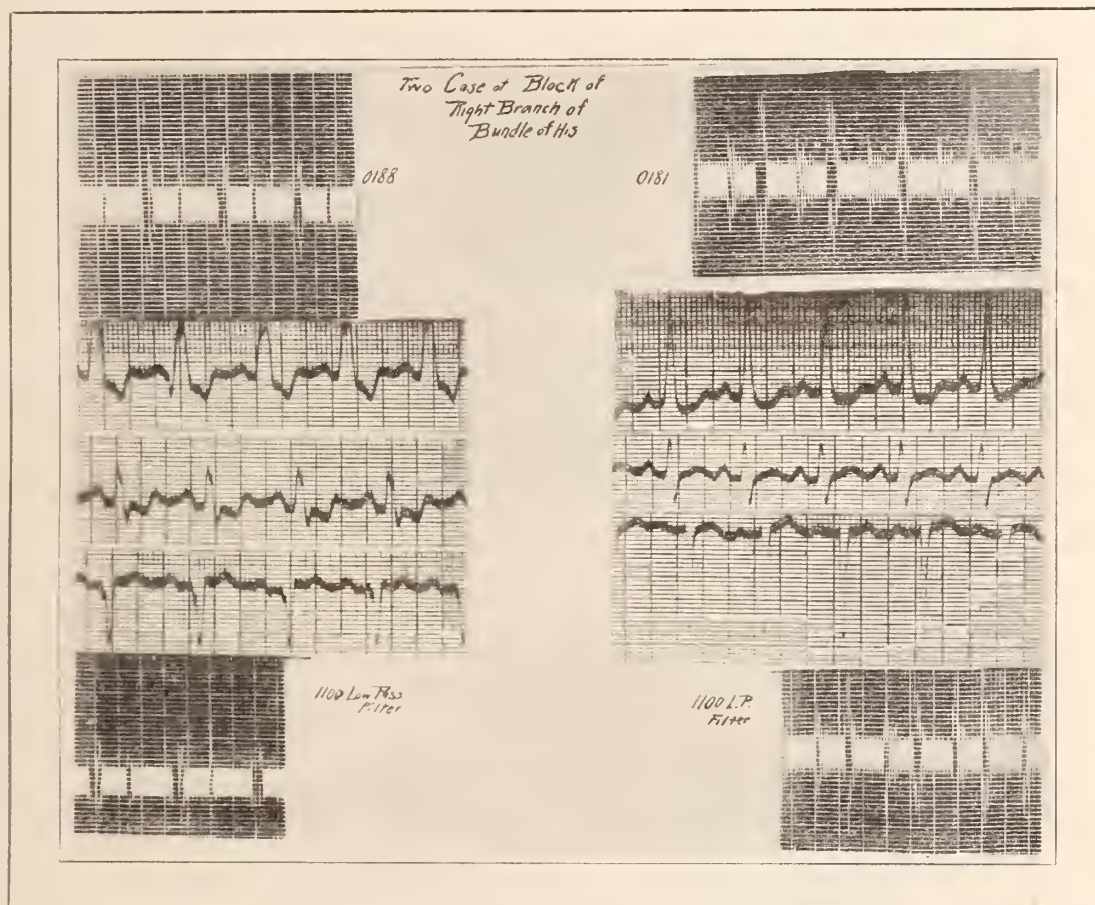


Fig. 2.—Phonocardiograms and electrocardiograms of two cases of right bundle branch block. Upper phonocardiographic records unfiltered; lower records 1100 Low Pass filter. Time-marker indicating 0.2 and 0.04 second.

to be recognized audibly, although of possible serious diagnostic or prognostic importance, through amplification, and (2) the study of characteristic pitch variation of murmurs with the same time relations but of possibly different cases, by blocking out certain frequencies and amplifying the usually inaudible residues.

These added avenues of study, as well as the valuable asset of the great certainty of production of perfect records, is made possible by the use of an amplifying and filtering electrical stethoscope. The principles employed are the reception of the sound waves from direct chest wall contact by a soft rubber protected microphone, eliminating most

The accuracy of the filters was only approximate in that a 100 vibration per second tuning fork was excluded only by the 130 Low Pass filter and not by the 130 High Pass filter.

In addition to the amplifying stethoscope used originally by Gamble and his associates, R. B. Abbott<sup>17</sup> of Purdue used a similar instrument in 1922. Jacobson<sup>18</sup> in Germany describes one in use in 1924. Gamble and the constructing engineers for our instrument mention the possibility of its use in recording sounds graphically, but to our knowledge no previous records have been published; possibly because, as we found, certain technical difficulties had to be overcome prior to successful use for

this purpose; (1) the galvanometer fiber must be tense, as was noted by Lewis in using Einthoven's method (3 mm. produced 3.5 mm. deflection); (2) the current delivered for audible sounds was far too great for direct reception by the galvanometer fiber and had to be cut to 1/100 by resistance; (3) the time-marker, the electromagnetic tuning fork—wheel mechanism, had to be shielded with metal and the shield grounded to prevent gross aberrations from induced current in the amplifying mechanism. When

the time element was not especially desired, the time marking mechanism has been omitted from certain records to facilitate study of detail.

Exclusive of Gamble's report<sup>15</sup> at the American Medical Association in 1925, the article of Cabot and Dodge<sup>16</sup> is of greatest interest with regard to the frequency characteristics of murmurs. They conclude that, except for late diastolic (presystolic) murmurs, other organic murmurs vary in frequency between 120 and 660, occasionally lower.

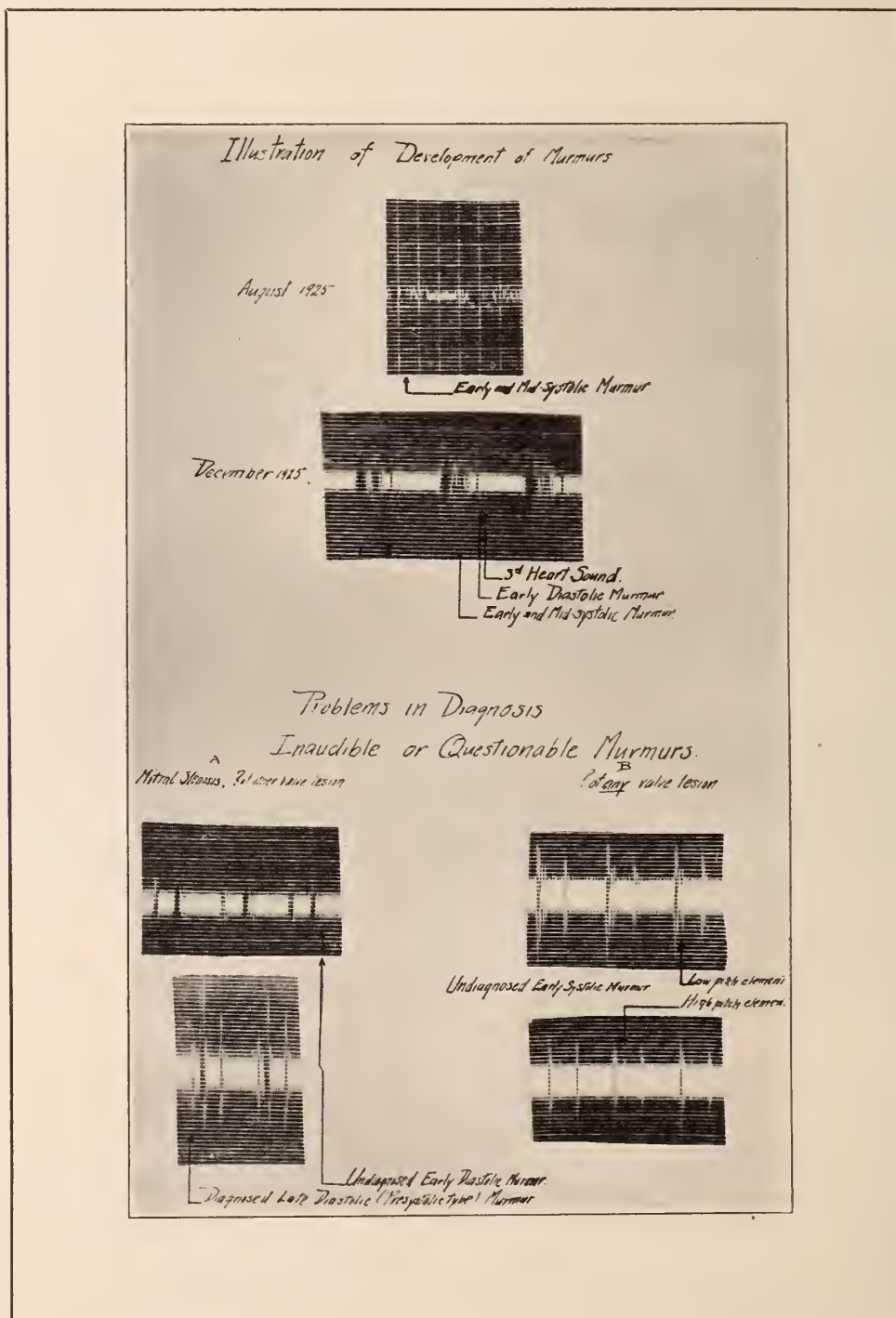


Fig. 3—Upper two phonocardiographic records illustrate change in character of murmurs over a period of four months in a case of rheumatic heart disease with mitral insufficiency and stenosis. Case A (Case 1 in text) and Case B (Case 2 in text) illustrate problems in diagnosis. Upper record Low Pass filter; lower record High Pass filter.



The records which are submitted represent several isolated illustrations of the possible value of the application of such graphic means.

1. A series of records on mitral stenosis confirm several facts previously demonstrated by other workers and some that are apparently new. (See Fig. 1.)

(1) We constantly found a murmur in mid-diastole, directly succeeding the third heart sound, if this were present, even when no presystolic mur-

nificance, and our records show it with greater consistency than previous observers. It is present in some cycles in every clinically diagnosed case of mitral stenosis which we have recorded.

(2) The so-called presystolic, late diastolic, murmur is present in most adults without auricular fibrillation, and is characterized by a fairly consistent crescendo-decrescendo quality with the decrescendo phase occasionally succeeded by a very

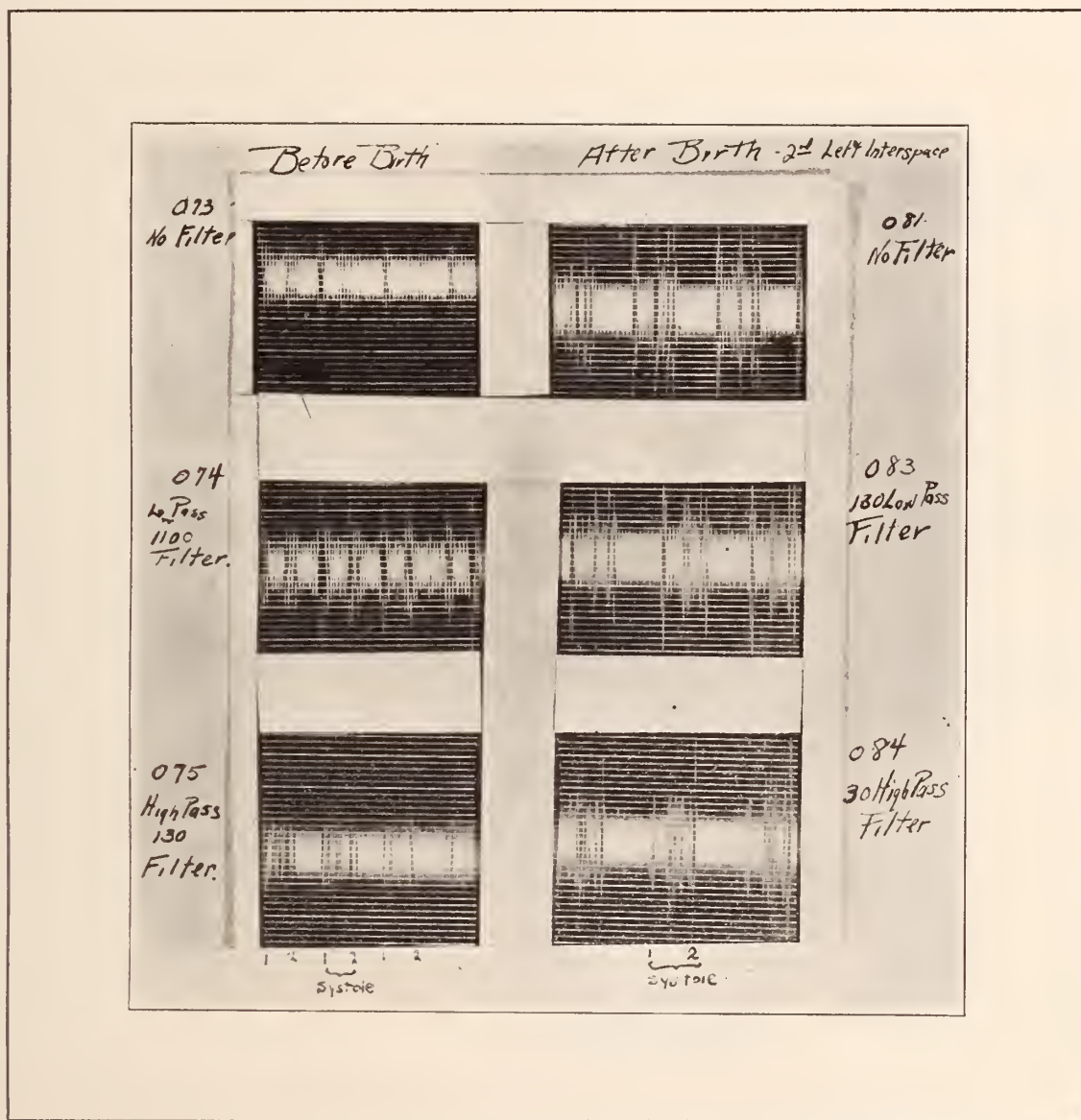


Fig. 4—Phonocardiographic records before and after birth of Baby W., referred to in text as Case 3. Note consistency of total systolic murmur in the High Pass filter both before and after birth. Definite evidence of an organic lesion. See Column 3 of Fig. 6.

mur existed clinically, as is generally noted in children and in cases of auricular fibrillation and flutter. It is usually *low pitched*.

This early mid-diastolic murmur has been recognized since the time of J. B. Williams in 1828, and Graham Steele and Mackenzie have done much to establish its diagnostic value. Lewis<sup>6</sup> records it and Wiggers and Dean<sup>19</sup> noted it. White and Wood<sup>20</sup> have especially stressed its diagnostic sig-

short pause before the first sound. This emphasizes the rationale of the term "late diastolic" rather than presystolic. Presuming, as shown in the close relationship of this murmur to the upstroke of the "a" wave in the jugular tracing, that it is caused by auricular systole, we would expect the longest presystolic pause to occur in partial auriculo-ventricular block (Lewis<sup>6</sup> quoting Mackenzie).

(3) The third heart sound which directly pre-

cedes the early diastolic murmur has been well demonstrated by Thayer,<sup>21</sup> Lewis,<sup>6</sup> Eyster,<sup>10</sup> Gibson,<sup>22</sup> Kahn,<sup>4</sup> and others. Our records confirm previous ones, in that the third sound and the diastolic murmur which immediately succeeds it, is associated with the preceding cardiac cycle, a phase of "active diastasis." It not only occurs in close time relation to the H wave in the jugular pulse, but seems to bear some relation quantitatively to it.

Lewis<sup>7</sup> observed two phases to the first sound in bundle branch lesions, and felt that they were not due to the ventricular dissociation but rather to a presystolic element, the cause of which he could not explain.

It is interesting to note that the total duration of the two phases of the first sounds in our records coincides very closely with the intraventricular conduction time, and suggests that this ventricular dissociation really is the cause for the split sound character. (See Fig. 2.)

### III. Two cases referred for opinion regarding possible inaudible murmurs:

CASE 1—F. H. No definite infection. Some questionable symptoms of congestive failure. Slight enlargement of left ventricle. Difference of opinion of clinician, (1) presystolic and early systolic murmurs; (2) loud first sound. No murmur. Record demonstrates low pitched apparently relative mitral early and midsystolic murmur (Case A, in Fig. 3).

CASE 2—Classical mitral stenosis on acute rheumatic fever basis. During period of infection with moderate congestive failure an early diastolic murmur was heard. Entirely cleared at period of discharge when free of any definite congestive failure. Record demonstrates an early diastolic murmur; heard previously second left interspace. Question of Graham Steele or early aortic insufficiency (Case B, in Fig. 3).

CASE 3—Baby W. Murmur intrauterine; high-pitched total systolic and early diastolic. Unusual for fetal heart murmur types. Classical pulmonic stenosis after birth (see Figs. 4 and 5). Impossible to diagnose prenatal because of (1) tachycardia, (2) faintness, and (3) unfamiliarity with normal variations of the fetal heart sounds. The latter factor is of chief importance, and work is now being done to clarify it. Importance of diagnosis of intrauterine fetal heart pathology is twofold: (1) study of causes of congenital lesions and (2) prevention of fetal death by prolonged labor with too great pressure on fetal head in infants known to have congenital heart lesions.

IV. Cabot and Dodge<sup>16</sup> place little importance on audible filtered murmurs, claiming that except for low-pitched "presystolic" murmurs, all organic murmurs are both low and high pitched. The conclusions on our findings in at least one instance of the field of clinical differentiation differ from the above in that there seems to be a certain characteristic sound picture with relation to certain frequencies. With special reference to the high-pitched element, we may critically review the four types of systolic murmurs heard at the apex. (See Fig. 6.)

(1) The relative mitral insufficiency shows an early decrescendo phase.

(2) The organic rheumatic mitral insufficiency shows an early and a late phase.

(3) The transmitted aortic sclerosis or mitral sclerosis shows less prominent early decrescendo and a late crescendo phase which is much in preponderance.

(4) The congenital pulmonic stenosis shows a

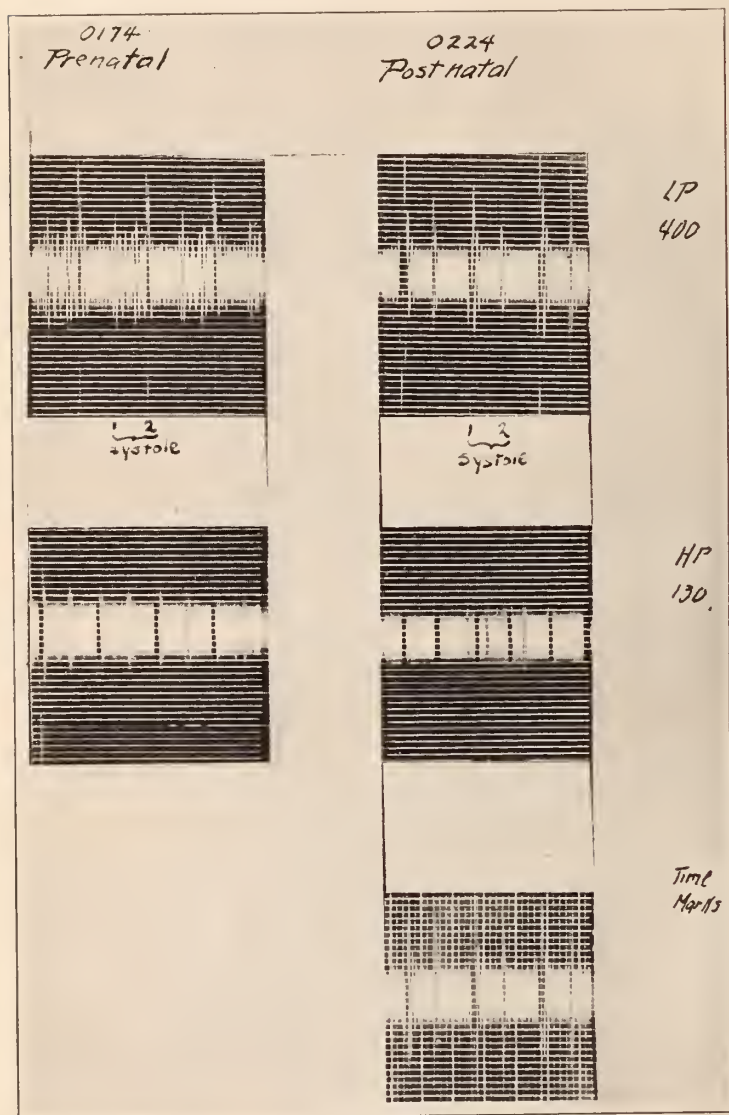


Fig. 5—Baby W., records taken before and after birth. Note presence of total systolic murmur in Low Pass filter before birth and absence in all other records. This baby was clinically normal. Contrast with Fig. 4. (Figs. 4 and 5 taken from article on "Phonocardiography of the Human Fetus" in American Heart Journal, on press.)

Its time relationship as well as its magnitude varies slightly with respiration, as would be expected from the effect of the changes in pressure in the thorax, an event probably closely dependent on relative auricular and ventricular pressure relations.

(4) The early diastolic murmur is recorded with much greater frequency than is noted clinically.

II. Intraventricular and bundle branch lesions are known clinically to produce a split or slurred first sound.



fairly level total systolic murmur with little fluctuation unless there is a midsystolic emphasis.

These characteristics are not offered as diagnostic formulae, but simply indicate the path for the accumulation of data along certain lines. They may very shortly, however, be valuable diagnostic aids.

In conclusion, it is believed that in this method of recording heart sounds there is a relatively precise aid, as simple to apply as the electrocardiograph, (1) in reaching clinical decisions of doubtful valve lesions; (2) in confirming such doubtful impressions as the quality of a sound and giving the clinician an organized knowledge that what he hears he knows exists because he can obtain graphic proof and has available similar records for comparison; and (3) in studying from the academic standpoint certain sounds and murmurs whose genesis is still in doubt.

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All women entering the University of California are given a physical examination, and those who are thirty or more pounds overweight, or twenty or more pounds underweight, are referred to Doctor Elliott, assistant physician for women. After determining that their weight problem is not due to any specific cause, she prescribes diet and health rules for them.

"The overweight girls usually need only to change their diet; but the underweight girls are a real problem. They

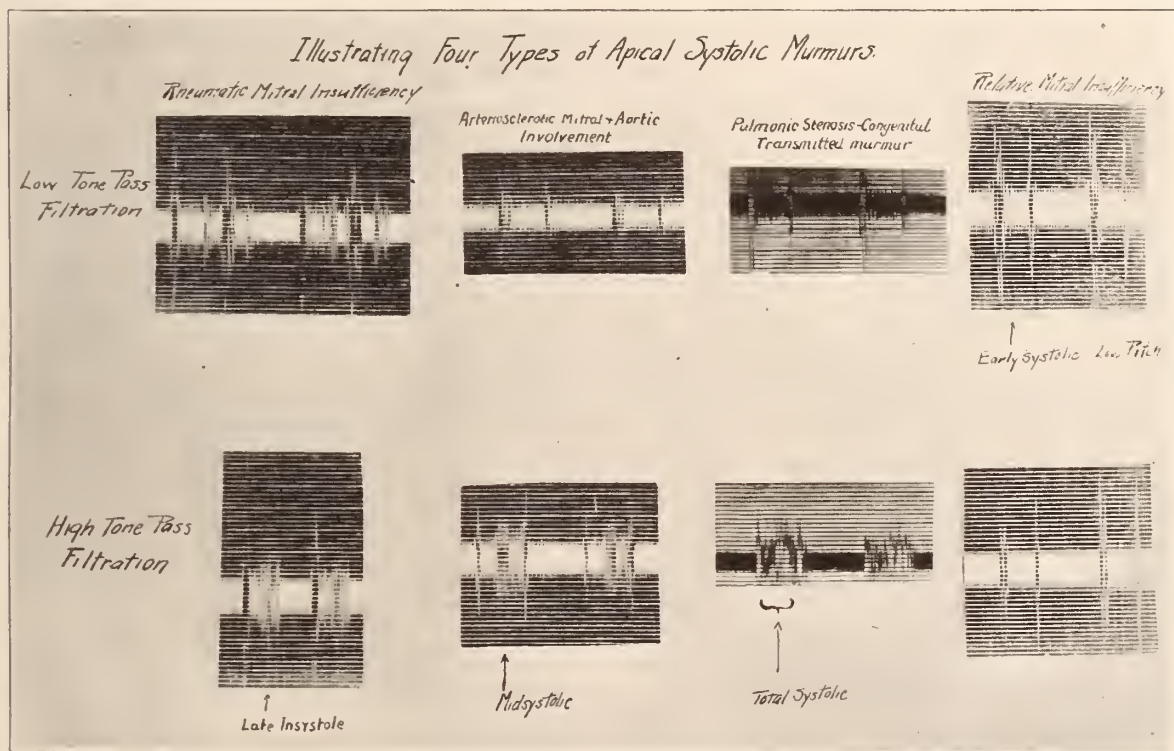


Fig. 6—Phonocardiographic records illustrating four types of apical systolic murmurs. The sound pictures in the High Pass filters seem to be more characteristic of the pathological lesion. Note the appearance of the benign relative mitral insufficiency murmur in the Low Pass filter alone. Note resemblance of murmurs in Column 3 to those in Fig. 4.

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are often proud of their underweight, due to the fact that they have accepted a style standard which rejects the normal health weight," says Doctor Elliott. "They may be anemic or be in a condition which would make them more susceptible to sickness."—U. C. Clip Sheet.

Thus fashion fashions us.

**Antipressor Fraction from Liver Tissue and Its Physiologic Action**—The clinical results obtained by A. A. James, N. B. Laughton and A. Bruce Macallum, London, Ontario (Journal A. M. A.) with liver extracts have been gratifying. In some patients the depression in blood pressure was very gradual, and the lowest point was reached many hours after the injection. In other cases the effect was immediate and persistent. The chemical nature of the depressor substance is unknown. However, the effects of tetra-ethyl-ammonium compounds on the blood pressure in dogs more nearly resembles those obtained by the use of liver extracts than do other known depressor substances.

## TORSION OF THE TESTICLE

## REPORT OF TWO CASES

By THOMAS E. GIBSON \*

DISCUSSION by Henry A. R. Kreutzmann, San Francisco; A. J. Scholl, Los Angeles; Robert V. Day, Los Angeles; L. P. Player, San Francisco; Charles P. Mathé, San Francisco.

## INTRODUCTION

**T**ORSION of the testicle, also known as torsion, volvulus, or strangulation of the spermatic cord, is a condition caused by sudden twisting of the cord shutting off the blood supply of the testicle and epididymis. It is of comparatively rare occurrence, judging from the paucity of cases reported. The records of the University Hospital do not contain a single instance of this condition. Apparently the first recorded case is that of Delasiauve, reported in 1840. O'Connor in 1919 collected 124 instances of the condition from the literature.

## CASE REPORTS

Undoubtedly the rarity of the condition is more apparent than real, because the condition so closely simulates epididymitis and is often so diagnosed.

(1) Such was the case of a Mexican boy, 17 years of age, who entered my service at the San Francisco Hospital on September 14, 1925, with a diagnosis of acute epididymitis and orchitis. He gave a history of being awakened from a sound sleep the previous night with sudden severe pain, swelling and tenderness of his left testicle. His temperature, however, was normal. His white count was 14,600 with 87 per cent polymorphonuclear leucocytes. He had had a similar attack a year before which quickly subsided with the aid of hot applications. His urine was negative and he denied venereal disease. On examination the contents of the left scrotum were found swollen and extremely sensitive, so that accurate palpation could not be accomplished. The skin of the scrotum was reddened and edematous. As far as could be determined the epididymis was situated in its normal position posterior to the testicle. The testicle was retracted somewhat higher than normal. On rectal examination the prostate and seminal vesicles felt normal and their secretion was normal microscopically. *A diagnosis of torsion of the testicle was made. An attempt at detorsion was unsuccessful.* Operation was decided upon, but owing to delay in getting parental consent the patient was not operated until September 16, 1925. A high incision was made over the external inguinal ring and the testicle delivered from the scrotum. On opening the tunica vaginalis about 15 cc. of blood-stained fluid escaped, and the testicle and epididymis were swollen and blue-black in color. The cord exhibited an intravaginal twist of 360 degrees in a clockwise direction. After detorsion and hot applications the testicle and epididymis showed no return to normal color, but nevertheless it was decided to leave the organ in situ rather than to remove it in

the hope that there might be some return of function. Accordingly the testis was fixed in normal position by sutures to the parietal layer of the tunica vaginalis, and the latter was fixed in turn by sutures to the scrotum. The incision in the tunica vaginalis was closed with catgut. The wound healed without reaction. The postoperative temperature went to 101 degrees F., but dropped to normal on the third day. The patient was discharged on the eleventh day postoperative. The testicle and epididymis still remained hard and swollen as before operation, but the pain and tenderness had entirely disappeared. The patient when seen at my office four months after operation showed complete atrophy of the testicle.

(2) F. S., age 19, gave a history of severe pain in the left groin and testicle, coming on suddenly while lifting a heavy roll of carpet. His temperature was normal. He denied venereal disease and examination of his urine was negative. The prostate and seminal vesicles were normal on rectal palpation, and their secretion was microscopically normal. The patient was seen with Dr. Ralph Soto-Hall on the eighth day after onset, and on examination revealed a tense, swollen testicle retracted upward toward the external inguinal ring. The scrotum was not reddened or edematous. The epididymis seemed to be situated on the lateral aspect of the testicle. The pain and tenderness had subsided to some extent. Operation (April 2, 1926), revealed a small amount of blood-stained fluid in the tunica vaginalis, and the testicle swollen to about twice its normal size. The cord exhibited a slight twist of not more than one-half turn in a clockwise direction. The predisposing cause in this case could not be determined. Probably the exciting cause was cremasteric spasm. The testicle and epididymis did not exhibit the blue-black gangrenous appearance of the first case, but was nearly normal in color. Apparently there was only partial interference with the circulation. It was therefore decided to leave the testicle in situ, so after detorsion the usual bottle operation for hydrocele was done and the testicle anchored to the scrotum. A communication from the patient four months after operation states that the testicle is very much smaller than normal, and causes him a good deal of pain at times. Evidently orchidectomy rather than orchidopexy would have been the proper procedure in this case.

## ETIOLOGY

Age appears to be an important factor in the etiology of this condition. The condition may occur at any age, but 75 per cent occur under 20 years. In O'Connor's series the average age was 13 years 4 months. Seventy occurred on the right and fifty-four on the left side. Seventy-two of his 124 cases were incompletely descended testicles, and three of these were intra-abdominal. Strangely enough, the condition comes on most commonly during sleep. In some cases it follows trauma or strain. It is said that torsion cannot occur with the normal testicle; some congenital anomaly or defect must be present. The congenital factor, according to Keyes, Collings, and, Campbell, is an undue mobility of the testicle. They state that probably an unduly long and lax gubernaculum is present in all cases. Spastic contraction of the cremaster muscle seems to be the exciting cause in some cases (Turner). In the intravaginal type of torsion the anatomical defect appears to be, as Lauenstein emphasizes, as unduly long mesorchium with a capacious tunica vaginalis, so that the condition may be termed "floating testicle." Instead of a broad band of attachment between the testicle and parietal tunica there is a narrow, stalk-like attachment of testis to cord, like a cherry on its stem, so that torsion is easily excited.

The latter condition was well exemplified in case (1), here reported.

## PATHOLOGY

Torsion of the testicle may be acute or recurrent,

\* Thomas E. Gibson (San Francisco). M. D. University of California, 1922; A. B. University of California, 1918; M. A. University of California, 1922. Graduate study: One year internship University of California Hospital; three and one-half years postgraduate work Department of Urology, University of California Hospital. Practice limited to Urology. Present scientific organizations: San Francisco County Medical Society, C. M. A., Sigma Xi. Present appointments: Chief patient department, Urological Clinic, University of California Medical School. Publications: Leukoplakia of Kidney Pelvis, with Report of Two Cases, Surg. Gynec. Obst., Oct., 1924 (with Hinman and Kutzmann). The Radical Operation for Teratoma Testis, Surg. Gynec. Obst., Oct., 1923 (with Hinman and Kutzmann). Cysts of the Wolffian Body, Ann. Surg., May, 1924 (with Hinman and Kutzmann). Tumors of the Epididymis, Spermatic Cord and Testicular Tunics, Arch. Surg. Vol. 8, 1924 (with Hinman). Tumors of the Testicle, California State J. Med., Feb., 1924 (with Hinman and Kutzmann). Malignant Tumors of the Testicle in Children, Ann. Surg., Dec., 1923 (with Kutzmann). Squamous Cell Carcinoma of the Bladder, J. Urol. Vol. 6, 1921 (with Hinman). The Follicles and Penalties of Flaming Youth, Better Health, April, 1925. The Pathology of Testicular Tumors, Ann. Surg. Jan., 1925 (with Hinman and Kutzmann).



and intravaginal or extravaginal. In the acute type the condition persists and the testicle undergoes atrophy. Rarely does it slough or become infected, requiring removal. In the recurrent type, spontaneous detorsion occurs or the patient learns to accomplish detorsion before the testicle is permanently damaged. More or less atrophy generally results after one or more recurrences.

The torsion may be in the cord within the tunica vaginalis or in the cord above the tunica vaginalis. The former composes the vast majority of cases. There may be one-half to five complete turns in the cord. The rotation may be in either direction, but is usually clockwise for the left testis, and counterclockwise for the right. There is always a moderate amount of blood-stained fluid in the tunica vaginalis. The scrotum is usually edematous and reddened. The blood vessels are thrombosed and there is total infarction of all tissues. On section no trace of normal tissue is seen, the whole organ resembling a blood clot.

#### SYMPTOMS

In the acute type there is sudden onset with severe pain in the testis, often radiating along the inguinal canal down the thigh or into the pelvis. There is often vomiting, which may even be stercoraceous, with more or less shock and prostration. As a rule there is no fever, but the temperature may be elevated one or two degrees. The testis is very tender at first. Pain, tenderness, and swelling persist for many days, but gradually subside and atrophy supervenes. The scrotum usually twelve to eighteen hours after onset becomes reddened and edematous, and palpation is difficult. Instances are reported in which no pain or prostration occurred. Symptoms are usually less severe in the recurrent type of torsion.

#### DIAGNOSIS

Torsion of the testicle must be differentiated from acute epididymitis and strangulated hernia. As stated above, the condition probably often runs its course with a diagnosis of epididymitis. Torsion of the cord probably explains many cases of "spontaneous atrophy" of the testicle and unaccountable atrophy following "epididymitis." When the house officer had seen case (1), herein reported, he recalled a similar instance in which the testicle later atrophied for some unknown reason in a patient who was given a diagnosis of acute epididymitis. Orchitis followed by atrophy may occur in certain diseases such as mumps, but usually the connection is quite clear. Ordinarily the diagnosis of torsion is not difficult if the condition is only borne in mind. A diagnosis of strangulated hernia or epididymitis should never be made without thinking also of torsion of the testicle, especially in subjects under 20 years of age. The history is important. Antecedent mobility, incomplete descension, muscular strain or sudden onset during sleep, and absence of venereal history are important presumptive factors. Prostatovesicle infections of nonvenereal origin often exist to complicate the diagnosis. A normal urine, normal prostate and vesicles, and normal semen are likewise important. If a patient has had gonorrhea the difficulty of diagnosis is manifestly enhanced.

On examination one finds a swollen, tense testicle

with reddened edematous scrotum, in which testis, epididymis and tunica vaginalis cannot be differentiated. An important point to bear in mind is, that torsion causes shortening of the cord so that the testicle is lifted well up toward the external inguinal ring. Edema of the scrotum is not marked as in epididymitis. Torsion is not attended by the early onset of chills and fever, characteristics of epididymitis.

Strangulated hernia is unusual in youth, and is characterized by greater systemic shock, absolute obstipation and rapidly increasing intoxication, with vomiting of increasing severity. In torsion general symptoms are not so marked, and though acute at first, they gradually subside instead of growing worse. If the testicle is absent from the scrotum a diagnosis of torsion must strongly be considered in differentiating strangulated hernia, incarcerated omental hernia, or appendicitis. A coincident Richter's hernia can hardly be excluded as a possibility.

#### TREATMENT

The treatment of torsion of the testicle offers three possibilities: (1) detorsion, (2) orchidopexy, and (3) orchidectomy.

Detorsion may occur spontaneously or may be accomplished by the patient himself, or the physician in exceptional cases. It is much more advisable in these cases, however, to accomplish this by operation and at the same time to suture the testicle in place (orchidopexy) as was done in the case reported, because recurrence and ultimate atrophy, more or less complete, are almost inevitable. Operative detorsion and orchidopexy is the procedure of choice if it is accomplished within a few hours of the onset of torsion. Putzu states that if the patient is operated on within thirty hours the testicle can be saved. Keyes et al. from experiments on dogs place the limit at forty-eight hours. If hot applications do not restore the circulation in the testis immediately following detorsion the patient's convalescence will be shortened by performing orchidectomy. In most cases that have come to operation the testicle has been removed because of its gangrenous appearance. Massa reports a case operated on within two hours of onset with complete recovery.

If the case has gone beyond the time limit, the testicle may safely be left alone to go on and atrophy. It need not be removed unless there is a coincident hernia, in which case infection and sloughing is more apt to occur. However, in industrial compensation cases where time is an important factor the patient will get back to work sooner if the testicle is removed. If the other testicle is excessively mobile it should be fixed as a preventive measure.

It is quite apparent, therefore, that early operation in torsion of the testicle is an urgent indication necessary to save life, not that of the patient but that of the testicle, as a very short time is required for the occurrence of ultimate atrophy.

#### CONCLUSIONS

1. Torsion of the testicle is a condition in which the testis is rotated about its long axis so as to cut off its blood supply.
2. Two cases of torsion of the testicle are reported.
3. The condition is probably not as rare as it is

generally considered because it is often mistaken for epididymitis. Many instances of unaccountable atrophy of the testis following supposed "epididymitis," or "orchitis" are undoubtedly cases of torsion of the testicle.

4. Seventy-five per cent of cases occur under the age of 20 years, but it may occur at any age. It commonly occurs during sleep, but may follow trauma or muscular strain. Some congenital defect is a necessary prerequisite for the occurrence of torsion. Undue mobility, a lax gubernaculum, cremaster spasm, and stalk-like attachment of the testis to cord with capacious tunica vaginalis are given as some of the predisposing causes of torsion.

5. Diagnosis is often not made because the condition so closely resembles acute epididymitis.

Differential points are absence of febrile reaction, and high position of testicle due to twists in the cord. Nonvenereal history and negative prostatic secretion are likewise important. Strangulated hernia must also be differentiated. The prostration, obstipation, intoxication, and vomiting of intestinal obstruction, as well as the general age incidence, serve to exclude the possibility. The diagnosis is usually not difficult if the condition is only borne in mind.

6. The treatment of torsion of the testicle is an emergency procedure. Immediate operation is absolutely essential to avoid complete and permanent damage to the organ. Unless the circulation is restored within a very short time after the occurrence of torsion, the testicle will undergo complete atrophy. If at operation there is a quick return of circulation and normal color, the organ may be anchored in situ with sutures in such a way as to prevent recurrence. If the organ retains its dark color after detorsion and hot applications, it should be removed. If the torsion has been present for some time the testicle will atrophy and the patient will recover without operation, but operative removal of the organ will greatly shorten the period of convalescence, a factor of importance in industrial surgery.

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#### DISCUSSION

HENRY A. R. KREUTZMANN, M.D. (1195 Bush Street, San Francisco)—Doctor Gibson's excellent paper emphasizes a condition which even up to the present time is rarely considered not only by the urologist, but especially by the general surgeon.

We know that the predisposing factor is a congenital malformation of the testicular attachments. It is interesting to note that in all the cases reported the torsion has been unilateral, with no recurrence on the healthy side. This would lead one to believe that the anomaly is pres-

ent only on one side, notwithstanding the fact that the good testicle may also be lax and on examination appear prone to the torsion of its cord.

The diagnosis is not difficult to make if one keeps this condition in mind in all cases where there is sudden, acute swelling and pain of the testicle and its adnexa. The disease most likely to simulate torsion is epididymitis. However, in the former condition the temperature is usually low; whereas, in the latter case it is usually high and may be associated with chills.

The most important factor is to make an early diagnosis. Detorsion can then be performed surgically before necrosis has begun, and the testicle can thus be saved.

A. J. SCHOLL, M.D. (Pacific Mutual Building, Los Angeles)—This paper is clear and concise and gives the reader a good working review of the conditions present and the various methods of treatment. Torsion of the testicle or spermatic cord is of comparatively rare occurrence, but probably occurs more commonly than the short list of published cases suggests. The recurrent, more so than the acute type, is likely to be unrecognized, as it is occasionally confused with epididymitis or orchitis and at times treated as such. Cases of acute torsion are usually operated upon or else complete atrophy develops. A number of the patients with testicular atrophy who give a vague history of mumps or other acute infectious conditions associated with testicular swellings, very probably have had a torsion of the spermatic cord.

Torsion occurs more frequently on the right than on the left side. Testicular anomalies in general such as undescended testicle also occur more commonly on the right, which indicates that there is probably some anatomical factor peculiar to short spermatic cords that predisposes to testicular torsion. In most of the specimens of twisted spermatic cords it has been found that there is present some abnormality of attachment of the testicle to the spermatic cord.

ROBERT V. DAY, M.D. (Detwiler Building, Los Angeles)—Doctor Gibson's paper leaves little to add. While the classical condition known as "torsion of the testicle" is extremely rare, slight torsion as a sequela of Andrew's bottle operation for hydrocele is quite common. Rarely this may result from Winckelman's eversion operation for hydrocele. It may more rarely follow any operation in which the parietal portion of the tunica vaginalis testis is loosened and delivered outside the scrotum.

The urologist naturally enough in private practice does comparatively few primary operations for hydrocele, for the reason they are seldom referred; but he does see a considerable number who have had a "bottle operation," and it becomes necessary to reoperate on these to relieve the pain. Partial atrophy is not an infrequent finding as a result of the bottle operation. The distress is usually due only partially to a certain degree of torsion; much sclerosis and compression of the cord does the rest.

L. P. PLAYER, M.D. (384 Post Street, San Francisco)—Doctor Gibson's excellent paper is so complete that it leaves no opportunity for additional data.

Undoubtedly, torsion of the testicle is more common than the literature on the subject would leave one to infer.

Differential diagnosis from epididymitis and strangulated hernia is, in a measure, difficult, but bearing in mind the differential points mentioned at the conclusion of the paper, and realizing the importance of immediate diagnosis, if one is to preserve a functioning organ, open operation for verification and treatment is certainly indicated if the condition is even suspected.

Many surgeons operate acute cases of epididymitis and claim in its favor more rapid relief of pain, drop in temperature, earlier recovery, and better end functional results.

One may classify torsion of the testicle into two classes: those due to anatomical defects and those due to faulty replacement of the organ in the scrotum after operations for hydrocele.

I have seen two cases of atrophied testicle of the latter class where the epididymis lay anteriorly.

CHARLES P. MATHÉ, M.D. (844 Phelan Building, San Francisco)—Doctor Gibson's timely paper calls our attention to the fact that torsion of the testicle on account of often being overlooked occurs more frequently than generally accepted. It should always be borne in mind in making diagnoses of diseases of the testis, epididymis and



cord. A very important diagnostic sign is retraction of the testis in the scrotal sac.

The symptoms may develop in one-half, four to twelve hours after torsion. It is very important to operate early. When there is no appearance of gangrene the conservative operation of detorsion and orchidopexy, consisting of excision and resection of the tunica as in the bottle operation for hydrocele, will suffice. The adhesions that form between the testis and the scrotum will keep it in place. Dr. M. Chevassu of the Hospital Cochin has performed this operation with success on numerous early cases. If, however, the blue-black appearance of gangrene is encountered and there is the added factor of infection, the testis may slough readily. Therefore, it is best to do a radical castration in these cases. Not having the patient's permission for castration, the conservative operation was attempted by me in one such case. It required the radical procedure a few days later. As the author emphasizes, early immediate operation will often save the testis.

### THE PREOPERATIVE PREPARATION AND SURGICAL TREATMENT OF CARCINOMA OF THE PANCREAS WITH COMMON DUCT OBSTRUCTION

By LEO P. BELL \*

*Carcinoma of pancreas is usually not a rapidly growing neoplasm, and life can in some cases be markedly prolonged on comparative comfort by the palliative operation.*

*Operative mortality is greatly lessened by preoperative preparation, regional anesthesia or ethylene and post-operative care.*

*Absolute diagnosis can be made only by microscopic section. In case of doubt the patient should be given the benefit of exploration and cholecystogastrostomy, since it is not a harmful operation even though error is made in the diagnosis of carcinoma. Relief is always immediate and complete.*

*Cholecystoduodenostomy can be very simple or a very difficult procedure. It is not the operation of choice, for the following reasons:*

1. *Cholecystogastrostomy is a simpler operative technique.*

2. *Bile in the stomach is not harmful or disturbing to the individual, of which we have ample proof in an extensive series of gastroenterostomies.*

3. *Occasionally the suture line of a cholecystogastrostomy or duodenostomy will not heal readily and leakage occurs. Leakage in a cholecystoduodenostomy is always fatal.*

4. *A cholecystogastrostomy leakage practically never occurs. When it does occur it very seldom is fatal if recognized early and feedings are discontinued.*

*Failure of union of the anastomosis line often occurs in very cholemic and emaciated old individuals.*

*Delay and careful operative preparation have reduced the postoperative mortality from 10 and 15 per cent to between 1 and 2 per cent. It is most unusual for a patient to lose his life from delay. When this does occur surgery would have merely hastened death.*

*Insulin should not be used as a routine except in those individuals showing increased blood sugar or sugar in the urine. The efficiency of insulin when given as a therapeutic agent has not been definitely established.*

DISCUSSION by Saxton Pope, San Francisco; Clarence G. Toland, Los Angeles; Emmet Rixford, San Francisco.

**C**ARCINOMA of the pancreas is considered by all authorities as the most difficult to recognize of all upper abdominal lesions. There is no other

form of cancer so universally fatal as are those of the pancreas. Upcott compares carcinoma of the pancreas to tumors of the central nervous system in that a growth so small is heralded with such widespread symptoms. The deep-seated, comparatively inaccessible situation of the organ, coupled with the fact that there may be little or no gross evidence of impaired function even in the later stages of the disease are the fundamental causes for difficulty in making a timely and proper diagnosis. Because of its anatomic location, carcinoma of the pancreas is never recognized until it has invaded the surrounding tissues.

Anatomically the peritoneum intervenes between the pancreas and the surrounding tissue. The pancreas having no true capsule, the head of the gland is moulded to the side of the duodenum, the anterior surface being in contact above and on the right with the beginning of the transverse colon, as a rule without even the interposition of the peritoneum. The anterior surface of the body of the pancreas forms a considerable portion of the bed of the stomach and is in contact with the pylorus. The left end of the body is in contact with the spleen and is in close relation to the left suprarenal gland and the left kidney. It can readily be seen how lesions of carcinomatous nature in the pancreas can involve the terminal end of the common bile duct, the ampulla of Vater, the posterior wall and pyloric end of the stomach, the duodenum, hepatic flexure of the colon and the large blood vessels including the portal vein.

The patient with obstructive jaundice presents a diagnostic problem in which all of the lesions of the upper abdomen with which jaundice is eventually associated must be considered, namely: catarrhal jaundice, cirrhosis of the liver, common-duct stones causing obstruction of the common duct, carcinoma of the gall bladder, carcinoma of the common duct and ampulla of Vater, metastatic carcinoma of the liver, and chronic pancreatitis.

In a report of 145 cases of carcinoma of the pancreas reviewed at the Mayo Clinic by Mussey in 1908 and Eusterman in 1922, the typical syndrome is given as follows:

All exhibited the malaise, lack of appetite and loss of weight and energy common to carcinoma of the digestive tract, 44 per cent complained of pain, 24 per cent of gastric disorders, 41 per cent of jaundice, 80 per cent of the patients were males, the average age was 56 years, average weight loss twenty-six pounds, and the average duration of illness only a few months. In those patients who had developed jaundice the following symptoms were manifested pruritus, clay-colored stools, enlargement of the gall bladder, liver enlargement, gastric disturbance, pain, progressive icterus, olive-green or black jaundice, rapid decline of weight and strength, glycosuria in 10 per cent of cases, lowered sugar tolerance, and fat in the stools. The pancreatic functional tests are much too unreliable to use for diagnosis.

Neoplasma in the ampulla of Vater may produce obstruction of the pancreas as well as of the common duct. The duct of Wirsung carries the entire pancreatic secretion in 83 per cent of cases, the ducts of Santorini are the main ducts in 12 per cent, in

\* Leo P. Bell (Woodland Clinic, California). M. D. Harvard University, 1915. A. B. University of Missouri, 1912. Master of Science in Surgery Mayo Foundation, 1921. F. A. C. S., 1922. Graduate study; Intern Lakeside Hospital, Cleveland, Ohio, 1915-1916. Four years Mayo Clinic as Fellow. Practice limited to surgery. Hospital connections: Associate in Surgery, Woodland Clinic, Woodland, California. Previous honors: Captain in late war. Scientific organizations: A. M. A., C. M. A., and Yolo County Medical Society. Publications: Preoperative Preparation and Surgical Treatment of Chronic Splenic Anemia (California and West. Med., 1925).

54 per cent of which the ducts of Santorini act as the substitute for the duct of Wirsung. In certain cases the ducts of Santorini remain uninvaded by the neoplasm for a long period of time. Again the ducts of Santorini not infrequently connect with the duct of Wirsung. In these patients complete biliary stasis exists, while pancreatic drainage into the duodenum is not in evidence. While this is likely to be a rarity, it presents no technical interest over the usual case aside from theoretical interest. Most of the patients suffer from lack of pancreatic secretions in the intestines with a lack of pancreatic digestion, evidence by bulky frequent stools, showing an increase in the amount of fats and changed relationship between saponified and unsaponified fats and absence of adequate protein digestion. Therefore, these cases may proceed to a rapid death as a result of the pancreatic deficiency although the elimination of jaundice and biliary stasis has been accomplished by cholecystogastrostomy.

Horgan in an exhaustive study on the histogenesis of carcinoma of the pancreas feels that the carcinoma may arise in any one of the sources, namely, the ducts, the acini or the islets.

While a fellow at the Mayo Clinic preparing my thesis on experimental production and relief of common-duct obstruction for my degree of Master of Science in Surgery, I became interested in the problem of preoperative preparation of patients with obstructive jaundice because of the very high mortality from hemorrhage which then existed. From the correlation of the work of a number of experimental workers a technique of treatments was established. This work was later carried out extensively and successfully by Walters, both experimentally and clinically.

Such workers as King and Stewart believe that bile pigments in combination with calcium or with sodium are less toxic than the uncombined pigments, considering calcium a protective mechanism against the circulating pigments caused by obstructive jaundice.

King, Biglow, and Pearce conclude that obstructive jaundice produced in dogs results in a loss of calcium, the calcium being given up by the bone to neutralize the toxic bile pigments circulating in the blood stream and in the tissues. Such neutralization affords protection to the body, but may lead to secondary disturbances, for example: bradycardia and changes in the blood coagulation time. Calcium, therefore, seemed the best means of preparing for operation, patients with obstructive jaundice, since it not only reduces the coagulation time of the blood, but also decreases the toxemia produced by the circulating bile pigments.

The experimental work of Lee and Vincent proved calcium lactate by mouth to be only one-half as efficacious as calcium chloride intravenously, the effect of the former appearing in three days, of the latter immediately. Bearing these experiments in mind a technique was worked out by which 5 to 10 cc. of calcium chloride was administered intravenously. These injections daily are not harmful as pointed out by Walters.

Opie in extensive experimental work on toxemia from chloroform poisoning points out that carbohy-

drates act in a protective manner to prevent disintegration of the body proteins when the individual is in a state of toxemia. He compared proteins and fats in feedings of dogs poisoned with chloroform and found that those fed carbohydrates died last or not at all.

The preoperative technique outline is as follows:

1. The patient is put on high carbohydrate diet with as much candy and sweets as he can eat to prevent disintegration of body proteins.

2. Proctoclysis with glucose and sodium bicarbonate is given as well as 3000 to 4000 cubic centimeters of water by mouth in twenty-four hours to diminish dehydration of and eliminate bile pigments.

3. A daily administration of 15 cc. of 10 per cent solution of calcium chloride is given for two to four days, depending on the severity of the illness.

4. Blood transfusions should be given within two days if reduction of coagulation time is not immediate or if the patient is very anemic.

Walters in a later paper reported the cases of thirty-four patients prepared for operation by this method without a death at operation.

The Rowntree-Rosenthal test of hepatic function, and the Van den Bergh test of the amount of bile pigments in the blood are valuable aids in formulating surgical judgment and in managing patients with obstructive jaundice.

In all cases of chronic obstructive jaundice exploratory operation should be done, for, as Sir Berkeley Moynihan aptly says, "no one living is infallible in the differential diagnosis of obstructive jaundice; this diagnosis is always so difficult, the chance of a life saved so important that, however positive the evidence of malignancy may be, I now advise operation on all cases." The consensus of opinion of such men as C. H. Mayo, Erdmann, and Moynihan is that cholecystogastrostomy, by the following technique, is the operation of choice, as the bile does not interfere with digestion in the stomach, the mortality is lower, and the technical difficulties are not so great. A trocar is inserted into the gall bladder and it is emptied of stones if any are present, and careful examination of the cystic duct is made to see if it is widely communicating with the common duct. The gall bladder is then joined to the stomach about two to three centimeters back of the pyloric ring in the usual technique of a gastroenterostomy. In seriously obstructed cases the operation should be done under regional anesthesia or in combination with very light ethylene or nitrous oxide, great care being used not to unnecessarily traumatize the tissue and to prevent excessive oozing. An additional safeguard is the slipping of a piece of the large omentum around the line of anastomosis to prevent leakage.

Parenchymal tissue goes through a gradual process of destruction from mild cell injury through severe cell injury with fatty degenerative changes before complete destruction takes place. This is borne out by my experiments on twelve dogs, for the purpose of determining the destruction of parenchymal tissue of the liver during obstruction of the common duct and its later regeneration following the relief of the obstruction by cholecystogastrostomy. The probable case of parenchymal tissue destruction is poisoning by bile pigment, increased secretory function of the



liver parenchyma, as shown by ultimate destruction of parenchymal tissue as the chronicity of obstruction develops.

Destruction of parenchymal tissue depends on the duration of obstruction. After such destruction connective tissue rapidly proliferates and replaces the space formerly occupied by parenchymal tissue. Bile pigment is not toxic to connective tissue cells and apparently acts as a stimulant to new growth by irritative action. It seems to be toxic to endothelial cells of blood vessels as manifested by petechial and massive hemorrhage in the parenchymal tissue. The interlobular biliary capillaries of the liver apparently are stimulated to growth by bile pigment and increased intrabiliary pressure. Besides, there is an unexplained physiologic factor which causes the change of interlobular ducts into liver trabeculae as the metabolic needs of the gland increase or destruction of parenchymal tissue progresses.

After relief of obstruction complete regeneration takes place, the rapidity of which depends on the duration of obstruction. The newly formed liver parenchymal tissue, arising from the undifferentiated interlobular bile capillaries, is pushed outward from the vicinity of the peribiliary spaces and forms in trabeculae with the undestroyed liver parenchyma. The connective tissue undergoes the shrinkage of age, becoming shorter, narrower, and flattened. After two months there is little evidence of excess of connective tissue in the interlobular spaces; it is still present in the peribiliary spaces, but only in moderate amounts.

The bile capillaries in the peribiliary spaces are converted into liver trabeculae. As this process goes on bile capillaries are often seen far removed from the peribiliary spaces. These are surrounded by newly formed parenchymal tissue in most cases. It is readily seen that these bile capillaries before they are surrounded by the growths of parenchymal tissue form the peribiliary spaces. Two months after the relief of obstruction only a moderate excess of biliary capillaries is seen in the peribiliary spaces. The blood vessels are also slightly in excess. The duration of obstruction and the consequent amount of destruction of the liver parenchyma are the factors controlling regeneration, and from two to four months after relief of obstruction will be required for this process of regeneration, the time depending upon the damage to be repaired.

This rapid regenerative power lies in the ability of the mesoblastic undifferentiated cells of the biliary capillaries which, under stress of destruction, caused by common duct obstruction are capable of producing any type of tissue contained in the liver.

The problems, therefore, which face the surgeon in a given case of carcinoma of the pancreas are as follows: (1) The amount of parenchyma tissue destruction of the liver and duration of obstruction. (2) The extent of parenchymal tissue destruction in the kidney, manifested by nephrosis or acute nephritis. (3) The extent of cholemia of the circulating blood. (4) The toxic effects of bile on the central nervous system and on the heart muscle. (5) The position of the obstructing carcinoma of the pancreas in regard to obstruction of the pancreatic ducts. (6) Weight loss, and dehydration.

The mortality rate following operations for the relief of obstruction of the common duct varies very greatly in the hands of different surgeons. It will be high if a preoperative régime, similar to that outlined above, and careful postoperative routine are not followed. The postoperative routine is carried out in a similar manner to the preoperative preparation, depending on the rapidity with which the cholemia disappears.

As illustrations of some of the problems of surgical intervention in obstructive cases of carcinoma of the pancreas, four case reports are hereby presented from our clinic showing that complete or partial relief may be obtained and life comfortably prolonged by the palliative operation of cholecystogastrostomy with no immediate postoperative mortality.

All cases reported were prepared for operation by the intravenous use of calcium chloride, glucose and sodium bicarbonate proctoclysis and subcutaneous injections, water by mouth and high carbohydrate diet as outlined previously and by transfusions in two instances.

In a group of four patients three were men. The ages were 40, 54, 61, and 63, and each had the typical syndrome of gradually deepening jaundice, indigestion, loss of weight, clay-colored stools, occasional vomiting, and anemia. The duration of jaundice varied from nine days to three weeks before operative intervention. Each had complained of indigestion from one to two years previous to onset of jaundice. Three complained of pain in the epigastric and gall bladder regions.

Mr. G., age 61 years, at the time of operation on January 9, 1924, was well until two months ago. Since that time he has complained of failing strength, indigestion, and epigastric pain. He has no jaundice and has lost little weight.

Mr. N., 54 years of age, at the time of operation on February 16, 1924, apparently very well.

Mrs. N., age 62, at the time of operation on November 11, 1922, was relieved for three months. She died four months after operation.

Mr. S., 40 years of age at the time of operation on April 6, 1923, was very much relieved until August, 1923, at which time he grew progressively worse and died in March, 1924.

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#### DISCUSSION

SAXTON POPE, M. D.—Cancer of the pancreas is such a hopeless disease that anything we can do to ameliorate the condition of the patient is acceptable. No attempt to substitute pancreatic function is of much avail, but a relief of common duct obstruction with drainage of bile into the alimentary tract is the one service we can render the patient.

In the preparation of these patients at the University Hospital, we have supplied their calcium deficiency by the intravenous use of calcium chloride. Their glycogen content has been raised by intravenous glucose and insulin, and the usual preliminary measures combative of shock are universally employed.

Doctor Bell has spoken of cholecystgastrostomy as the operation of choice. We have done this anastomosis a few times, but in a series amounting to something over twenty cases in the past ten years we have found that cholecystduodenostomy is a simpler and more logical operation.

It is strange that surgeons and physicians both have looked askance at this procedure as one too risky and difficult to be employed even in desperate cases. It is surprising how simple an open anastomosis between the

fundus of the gall bladder and the first portion of the duodenum can be made.

The viscus is in close anatomical relation to the intestine and more or less fixed to it by nature; while the movable pylorus is less readily fixed and sutured to the gall bladder. Bile in the stomach is, of course, no particular detriment to gastrointestinal function; however, it is physiologically improper and in poor taste to say the least. Let us drop down a few inches on the alimentary route and drain the gall bladder where nature intended it should drain.

The surgical technique is simplicity itself. A double line of sutures of chromic gut, with no fear of peritoneal infection resulting from the open lumina. If the suture line be water-tight at the finish, a rubber dam drainage (in Morrison pouch) is all that is necessary to insure freedom from peritoneal infection.

So far as I recall, without reviewing our hospital records, the operative mortality is about 10 per cent. The postoperative course of the disease extends from a few weeks to several months, and the comfort of the patient warrants this particular form of surgical interference.

CLARENCE G. TOLAND, M. D. (Pacific Mutual Life Building, Los Angeles)—I have thoroughly studied Doctor Bell's paper. I have not a thing to add. It is an extremely instructive paper and one that should be carefully read by all surgeons.

Doctor Bell was one of the first surgeons to become interested in the problem of preoperative preparation of patients with obstructive jaundice. Later he and Doctor Walters of Rochester, Minnesota, carefully worked out a technique that reduced the operative mortality of such cases to a very low point.

EMMET RIXFORD, M. D. (1795 California Street, San Francisco)—Having read Doctor Bell's paper on the preparation of patients for operation in carcinoma of the pancreas I can offer little in criticism beyond appreciative commendation. The scope of the paper, however, is far wider than is intimated in the title, for it includes a description of carcinoma of the pancreas which is classical and an epitome of valuable results of much experimentation in the field of pathological physiology of biliary obstruction, as well as a more than usually intimate account of the resulting damage of the liver and the regeneration of that organ.

It is difficult to evaluate the items of the suggested technique for preparation for operation in each case, for that can be done with finality only after careful tabulation of results of various procedures in a very large number of cases. It should find its field of application large in the wide range of affections causing obstructive jaundice and chiefly in cases of complete jaundice of long standing. On the other hand, it is less necessary in early jaundice. Better diagnosis, if not requiring so much time as to cause undue postponement of operation, will lessen the mortality with a simpler technique.

I am especially interested in Doctor Bell's account of the mechanism of regeneration of the liver. It has long been known that the liver possesses greater power of regeneration than any other tissue of the body, and since the liver is originally developed from the bile capillaries and the liver cells during life are constantly being renewed from the same source, regeneration is to be sought for from that quarter. The capacity for the liver for regeneration or rather, in this case, compensatory hypertrophy, may be well illustrated by a case in my personal observation in which the left lobe of the liver attained the volume of the normal right lobe after destruction of the latter by pressure of two intrahepatic cysts of septic origin.

On the question of choice of procedure in irremovable biliary obstruction the superiority of anastomosis of the gall bladder with the stomach over anastomosis of the gall bladder with the duodenum is not proved.

It should not be forgotten that carcinoma of the papilla or of the diverticulum of Vater is every now and then removable, as Abbe of New York pointed out many years ago, because persisting jaundice, the indication for operation, takes place relatively early. Care should, therefore, be taken during the conduct of the operation not to confound operable carcinoma of the papilla with inoperable carcinoma of the pancreas.



## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### A BRIEF OF THE BEST MODERN PRACTICE IN THE TREATMENT OF PRIMARY AND SECONDARY SYPHILIS

**The Editor**—If the old adage that he who knows syphilis knows medicine is true, the cause of health is being better served than it was even a few years ago. It also has been said that every physician who sees ten patients a day sees at least one with syphilis, whether he realizes it or not.

This, the most destructive and expensive of all plagues that ever have affected the human race, appears to be decreasing in prevalence, at least in some of its phases.

Earlier more definite diagnosis and more intelligent treatment must be given the greater share in bringing about this encouraging situation, because surely more than 90 per cent of syphilitics are still the private patients of private doctors.

Every physician, whatever his experiences, will find something of value in this issue of *Bedside Medicine for Bedside Doctors*.

Suggestions are invited for other subjects, and a post-card will give any member a chance to take part in these discussions.

**Howard Morrow \***—The importance of the adequate and immediate treatment of early syphilis cannot be stressed too strongly. If the patient is deprived of this early and abortive treatment it may mean the difference between a cure and a life of ill health. Every attempt should be made to make a positive diagnosis at the time of the patient's first visit. Dark field examination of serum from the initial lesion is of great importance. It usually permits of a diagnosis many days or weeks before a positive Wassermann reaction occurs. I do not think that one is ever justified in instituting treatment as a therapeutic test in early syphilis. The results are seldom conclusive, and it may cloud the clinical and serological picture to such an extent that a positive diagnosis is impossible.

Once the diagnosis is made in primary syphilis we give the patient immediately 0.4 gm. of arsphenamin or 0.6 gm. of neoarsphenamin. Three such injections should be given during the first week and then weekly injections for one month. This series constitutes one course. After three months the course should be repeated, eliminating, however, the intensive treatment given during the first week.

As soon as the arsphenamin course is finished, mercury should be started. The best methods of giving mercury are by intramuscular injections or by inunctions. I prefer mercury salicylate for intramuscular use and give weekly injections for eighteen doses. Mercury is probably as important as the arsenical preparations in the treatment of syphilis. It finishes the work that arsphenamin has started. Every course of arsphenamin should be followed by a course of mercury. Mercury given hypodermically

or by inunction is almost universally used in conjunction with the modern preparations of arsenic. Some physicians prefer gray oil and a few advocate the use of the soluble salts of mercury.

A third or fourth course of arsphenamin and mercury might be necessary according to the result of repeated Wassermann reactions, clinical findings, and the spinal fluid examination.

Iodide of potash is of little value in early syphilis, as it has no effect upon the treponema pallida.

Sulpharsphenamin is inferior to neoarsphenamin and arsphenamin in early syphilis, and its use should be confined to congenital syphilis or to patients with early acquired syphilis when intramuscular injections are necessary.

Tryparsamide, like sulpharsamide, should not be given as a routine in early syphilis.

Silversalvarsan is still used in Germany, but it seems to possess no advantage over the other arsphenamins and its use in this country is being discontinued.

Bismuth preparations are of great value in the treatment of syphilis, but they are of greater value in late syphilis than in early infections. They clear up syphilitic manifestations as rapidly as mercury, but more slowly than the arsenicals. Bismuth compounds should not be used to abort syphilis. The greatest value of the bismuth preparations seems to be in those patients in whom mercury and arsphenamin have failed. The usual course of bismuth therapy consists of ten weekly intramuscular injections. Reactions after bismuth injections are milder than the reactions after mercury and arsphenamin.

In conclusion, there is little to choose between arsphenamin and neoarsphenamin. At least two courses of arsenic should be given, and each course should be followed by a course of mercury. An early diagnosis with an attempt to abort the infection should be our aim.

**H. J. Templeton \***—Two main factors determine success or failure in the treatment of early syphilis. They are, first, the time at which the diagnosis is made and, second, the faithfulness with which uninterrupted intensive treatment is pursued during the first year.

An extremely early diagnosis is a prime requisite for a complete radical cure. The earlier the diagnosis the higher the percentages of cures. The ideal time to begin treatment is in the first week of the chancre before the Wassermann has become positive. A diagnosis at this stage depends upon the

\* **Howard Morrow** (809 Fitzhugh Building, 384 Post Street, San Francisco). M. D. University of California. Practice limited to Dermatology. Hospital connections: University of California, Southern Pacific, St. Luke's, St. Mary's, and other hospitals. Appointments: Clinical Professor of Dermatology, University of California. Publications: Numerous in current medical magazines.

\* **H. J. Templeton** (3115 Webster Street, Oakland). M. D. Ohio State University, 1917. Graduate School of Medicine, University of Pennsylvania, 1924-25. M. Sc. (Med.) University of Pennsylvania, 1926. Appointments: Dermatologist, U. of C. Infirmary; Clinical Instructor in Dermatology, Stanford Medical School. Publications: "Hay Fever Intermountain District," California and Western Medicine, June, 1924. Practice limited to Dermatology and Syphilology.

demonstration of the spirochetes. This early diagnosis is so closely related to successful treatment that one might say, paradoxically, that the dark field is one of our most important therapeutic agents.

The next essential is about a year of continuous treatment. This should be carried out regardless of possible negative laboratory tests. The Wassermann reaction may become negative after the first course or may never have been positive at all, but treatment should be steadfastly continued. We should keep our patients under the influence of our various drugs constantly during the first, most important year. Rest periods have no place in the treatment of early lues, provided that the patient is robust, in good general condition and does not react badly to medication, for relapses will be bound to occur in direct ratio to them. Early syphilis should be treated most intensively. For the first course of treatment I prefer old arsphenamin, as I believe that it is somewhat more spirocheticidal than neoarsphenamin. For the later courses of arsenicals I favor neoarsphenamin as its continued administration is better borne. I give three injections of arsphenamin the first week, then weekly injections until six have been given. Starting a week prior to the last injection of arsphenamin I give weekly injections of .2 gms. of potassium bismuth tartrate until twelve have been given. Then eight weekly injections of neoarsphenamin followed by twelve injections of mercury salicylate a week apart. Another course of eight injections of neoarsphenamin followed by twelve injections of bismuth completes the year. All of the above courses overlap the next one by one week. I believe that this overlapping guards against relapses.

Bismuth has conclusively proved its merits as a spirocheticidal agent and ranks in value second only to the arsphenamins. It would seem to excel mercury not only experimentally, but in clinical effectiveness. However, it does not relegate mercury to oblivion. By alternating bismuth and mercury between courses of the arsphenamins we can attack the spirochetes in a new vulnerable spot each time. This rotation keeps them from becoming immune to the action of our drugs. Bismuth can very effectively take the place of the arsphenamins in those patients who develop an intolerance for arsenic. It has been proved that bismuth can of itself cure secondary and primary syphilis, although it is inferior in this respect to arsphenamin.

We should not overlook the natural resistance of the patient. He should be put in first-class general condition at the onset of treatment and should be so maintained by general hygienic means throughout the whole course. The dosage of the various drugs should be adjusted to meet his individual tolerance.

**Hermann Schussler, Jr.\***—The following plan of treatment has proved so successful in my hands that I have no hesitation in recommending it for use in early syphilis.

The patient comes twice a week for eleven weeks,

which is the duration of each course. At the first eight visits he receives an intravenous injection of neoarsphenamin. At the remaining fifteen visits he receives an intravenous injection of novasurol. An intramuscular injection of bismuth is given with each dose of neoarsphenamin, and with the first four doses of novasurol, making twelve doses of bismuth in all. At the end of the course, a rest of one week is allowed, after which a Wassermann test is done, and the next course of treatment begun at once. Each course, with the rest period, covers three months, so that four full courses are given in one year. A year's treatment, therefore, includes thirty-two doses of neoarsphenamin, sixty doses of novasurol, and forty-eight doses of bismuth. I have yet to see a primary or secondary case of syphilis requiring more treatment than this for cure, as we understand the word "cure" at the present day.

Neoarsphenamin is the safest and most convenient arsenical, and when given twice a week in full doses it is therapeutically equal to arsphenamin. The initial dose is 0.6 g., and the others are increased to 0.9 g. if well borne. The dose is dissolved in the ampule in cool, freshly boiled water, not over 3 cc., and the patient is not "prepared" by fasting or catharsis.

Novasurol is given intravenously without dilution, as it is not irritant. The first dose is 0.8 cc., the second 1 cc., and the rest 1.2 cc., which is the full contents of an ampule, representing 2/3 grain of metallic mercury. I have ceased employing insoluble intramuscular injections, and I never expect to employ either of them again. Intravenous novasurol has opened up entirely new possibilities in mercurial therapy. I have never seen renal irritation result from it.

Bismuth as an antisyphilitic remedy has come to stay, and should form a part of every routine course, as it will kill the spirochetes that arsenic and mercury have spared. It can only be used intramuscularly, and is practically painless. Being rather slowly absorbed it replaces insoluble mercurial injections as "depot medication." My favorite preparation is bismudol, which is clean, convenient, effective and remarkably well borne. As x-ray studies have shown that the bismudol shadow takes six weeks to disappear from the gluteus muscle, the patient is never wholly without medication during the year. Far from being a disadvantage, this is very desirable, as Doctor Templeton has shown. One of the most important parts of the treatment, and one often neglected, is the complete eradication of all foci of infection, which are important causes of severe toxic reactions from neoarsphenamin, and tend to keep the Wassermann positive indefinitely.

Fully 90 per cent of the early cases thus treated have become Wassermann negative after one course as described, and none has remained positive after two courses. The four courses should always be

\* **Hermann Schussler, Jr.** (Fitzhugh Building, San Francisco). M. D. Harvard, 1918; B. S. University of California, 1914. Graduated study; Junior intern, San Francisco Hospital, 1918-19; senior intern in medicine, Stanford Hospital, 1919-20; assistant resident physician (heart service) Barnes' Hospital, St. Louis, Mo., 1920. Previous honors: Clinical Instructor in Pediatrics, Stanford Medical School, 1922-26; assistant in Stanford Chil-

dren's Clinic, 1921-26; Visiting Pediatrician, Stanford Service, San Francisco Hospital, 1922-23. Present hospital connections: St. Luke's Hospital, Health Center, in charge of Syphilis Clinic (since March, 1924). Scientific organizations: San Francisco County Medical Society, C. M. A., Fellow A. M. A. Practice limited to Internal Medicine. Publications: Two papers on "The Intensive Treatment of Congenital Syphilis," both published in California and Western Medicine, August, 1922, and April, 1925 (with H. K. Faber); "Leishmaniasis in the United States," J. A. M. A., January 13, 1923.



given, however, and a Wassermann should be done twice a year for three additional years. Examination of the spinal fluid is also advisable, and should be done at least once before dismissal. In conclusion, I feel certain that if every early syphilitic were given treatment of the extent and character described above, such conditions as aortitis, aneurysm, tabes, and paresis would become a memory.

**Franklin Farman** \*—In early primary and secondary syphilis it is possible to obtain both a clinical and serological cure in the great majority of cases, provided extensive treatment is followed through by the patient and physician.

It is well to undertake the treatment with a definite plan or course of medication outlined in advance in order to enlist the full co-operation of the patient. Deviation from a standard routine of treatment oftentimes must be made if the individual patient has an intolerance for any of the anti-spirochetal drugs—arsenic, mercury, or bismuth. The multiplicity of the preparations of these drugs makes selection more or less a matter of personal choice.

My plan of treatment of early syphilis is instituted only after a positive diagnosis has been made, based upon a correlation of the history, clinical manifestations, Wassermann tests, and dark field findings (if a chancre-like sore is present).

I first give an intravenous injection of neoarsphenamin 0.4 gm. This is followed by two more injections in rapid succession, about three days apart, increasing the dosage usually to 0.6 gm. From then on regular weekly injections of neoarsphenamin 0.6 gm. are administered until a total of ten injections have been given. After the third injection of neoarsphenamin some form of mercury medication is started. Recently I have been using bichlorid of mercury, grain one-half, in an oily base. I believe that mercury salicylate is more efficacious, but it frequently produces gluteal soreness and discomfort. Intramuscular injections of some form of mercury are given once or twice per week over a period of two or three months, guarding against overmercurialization, manifested generally by soreness of the gums, mild gastrointestinal upsets, or albuminuria.

Following the course of mercury the patient is advised to take potassium iodide for one month. I usually prescribe the potassium iodide put up in a palatable vehicle, so that the patient receives 20 to 40 grains per day.

Following the month of potassium iodide medication, the patient is allowed a complete rest from treatment. At the end of this time, about five to six months, a check-up Wassermann test is made. If positive, a second though less intensive course of arsenical and mercury medication is repeated. If negative the patient is advised to return within three months for further observation and tests, blood and spinal fluid Wassermann. From then on any further antiluetic treatment necessary is carried out as for a case of late syphilis.

My results with the above plan of treatment have been encouraging, obtaining in the majority of cases

of primary and secondary syphilis, apparent clinical and serological cures.

**J. A. Cooper** \*—The use of bismuth in addition to the routine treatment of syphilis by arsphenamin and mercury is becoming a well-recognized procedure. There seems to be some difference as to whether a patient should be allowed a rest period or not. Where no rest periods are allowed my experience has been that the Wassermann becomes negative sooner and is less likely to become positive again.

In spite of the fact that the administration of mercury by mouth is universally condemned, it is remarkable how effectively it will act when so administered in solution. Biniodide is easily given in doses of 1/9 grain to the dram in combination with 3 grains of potassium iodide. People of moderate circumstances are too fastidious or too lazy to give themselves inunctions while they can hardly afford to pay to have these administered by an attendant. Quite often a person will be able to take this treatment regularly, when there will be obstacles preventing regular visits for hypodermic injections.

**Francis X. Voisard** \*—The best modern practice in the treatment of primary and secondary syphilis is hard to write upon.

No two patients are alike. Often we come across a patient who will not respond to the arsphenamins when others will be greatly benefitted.

As a rule primary syphilis is better combated with the arsphenamins. If the treatment is started early there will be no secondary syphilis.

After a good whitewash I use the bismuth preparations, later mercury. No Wassermann blood test during the first year of treatment.

For the last two years I have used only one drug at the time: the arsphenamins, bismuth, mercury.

My objections to the conjoint mercurial and arsphenamin treatment are: (1) mercury will irritate the kidneys and inhibit their power to eliminate the arsphenamins; (2) the latter remaining longer and in a larger quantity in the liver; (3) will cause complications such as jaundice, dermatitis, etc.

With mercury watch the kidneys; with arsphenamins, the liver.

If the arsphenamins are contraindicated or do not bring results, I use bismuth or mercury. One can select the method best suited to the patient.

I use bismuth following the arsphenamins because it prolongs the effect of the latter on the treponema pallida.

Know your patient well: age, habits, urinary organs, heart, liver. And whatever drug you use, start with small doses; learn how much he can stand.

\* **John Alfred Cooper** (Beatty Building, Modesto, California). M. D. Stanford University, 1920; A. B. Stanford, 1916. Graduate study: Intern San Francisco Hospital, 1919-20; house officer in Surgery, San Francisco Hospital, 1920-21. General practice. Hospital connections: St. Mary's, McPheeters, and Robertsen hospitals, Modesto, California.

\* **Francis X. Voisard** (717 California State Life Building, Sacramento, California). M. D. Victoria University, Canada, 1891. Graduate study: Two years in Hotel Montreal, Canada; one year French Hospital, San Francisco; six months postgraduate New York City; six months Hospital Niecker, Paris, France; six months Hospital St. Louis, Paris, France. Practice limited to Urinary, Skin, Syphilis since 1904. Scientific organizations: A. M. A., California Medical Association, Sacramento Medical Society.

\* **Franklin Farman** (1501 South Grand Avenue, Los Angeles). M. D. Rush Medical College, 1917. Practice limited to Urology. Hospital connections: California-Lutheran, Anita Baldwin, and Hollywood hospitals, and Graves Memorial Dispensary.

Keep in mind that your clinical knowledge will be of great help to you and your patient. Make use of a competent laboratory if you can.

It is hard to set strict rules in treating syphilis, number of doses of this or that drug; your close contact with the patient will enable one to answer these questions.

Early treatment gives better chance to the patient; late syphilis very seldom is cured. A close watch over the patient will save him and you many disagreeable happenings. The organs of the body being subjected to such a severe and prolonged treatment must be looked at closely so as not to make the treatment worse than the disease.

I hope these few lines will be of some help to the family physician, who often sees the patient first; also those patients who cannot consult a specialist.

**Kenneth L. Dole** \*—I appreciate your sending this round-table discussion to me, and have enjoyed reading those contributions already included. I started to write down my experiences, when it came to me that my primary and secondary syphilis patients were too few to permit of intelligent conclusions. We don't get many of these patients. In five years I have seen only two true primary syphilids.

**A. E. Edgerton** \*—The situation today in the treatment of syphilis is more complicated than ever before. However, an attempt should be made to treat it thoroughly and systematically. The thought must be always in mind that syphilis is a systemic infection for an indefinite time before appearance of the initial lesion or chancre and should be immediately attacked by general rather than local measures. It should also be borne in mind that, even though the macroscopic evidence of syphilis disappears shortly after treatment has begun, it does not mean that destruction of the organism has taken place in all other parts of the body. Syphilis has been well called a relapsing disease.

The most important factor in its clinical management is early diagnosis, and the most certain and effective means of obtaining this is by dark field illumination. This, if positive or if one is suspicious of a hard chancre, is followed by intensive treatment with neoarsphenamin and mercury. My initial doses of the neoarsphenamin in the adult, if his physical condition will permit, is 0.9 gm. My treatment consists of an injection every four or five days until ten injections are given. Then mercury is given intravenously once a week for about fifteen doses. The preparation I usually use is mercurosal in 0.1 gm. doses. Due to its low toxicity I find this preparation most effective. In patients in whom I do not use this preparation I employ the soluble solution of succinimid in 1/6 gr. doses intravenously.

An examination of urine is done once a week during the course of treatment with neoarsphenamin

and mercury in an effort to detect the first signs of evidence of kidney irritation.

In some acute cases following treatment with neoarsphenamin and mercury, I have followed up with a course of bismuth once a week for a period of two or three months, or potassium bismuth tartrate and butyn in 0.1 gm. doses. I find that bismuth, however, is more advantageous in the later stages of the disease.

If I am using iodides by mouth I use a saturated solution of potassium iodide, administering from 10 to 50 drops before meals on an empty stomach, or a solution of sodium iodide 30 gr. at a dose intravenously along with the mercurial treatment, especially if there is any evidence of involvement of the nervous system.

If after the first course of neoarsphenamin and mercury is given the blood report is positive, a second series of neoarsphenamin and mercury is administered, followed by a series of bismuth weekly for at least fifteen doses.

Neoarsphenamin is never given until physical examination has been made to determine as far as possible the activity of the process and the extent of damage. Wassermann tests are made at least every six months and for a period of three years after negative reports are received.

**Dan H. Moulton** \*—In the treatment of primary and secondary syphilis by the general practitioner the most important point is to get started as early as possible. Many patients come to us after having been "treated" by some "friend" or many times by a druggist who has scoffed at the idea of the lesion being syphilis.

The earlier we see the patient and make the diagnosis and get started on the proper treatment, the better the results, both temporary and permanent. I regret to say that I often lose sight of the patient after the initial lesion is cleared up.

The dark field examination of the initial lesion is of great importance, as the Wassermann test does not always assist us in the very early stages, but may deceive us with a negative finding. It is also important to have confidence in the laboratory making our tests. Having satisfied ourselves of the presence of primary syphilis, we must explain the importance of active and thorough treatment to our patient. He or she must be made to understand the necessity of not only the active abortive treatment, but the follow-up treatment for at least three years.

I give 0.6 gm. doses of neoarsphenamin twice a week for the first month, to be followed by mercury, either by inunctions or intramuscular injections of mercury salicylate, twice a week for two months. Then I give another course of 0.6 gm. neoarsphenamin once a week for a month, to be followed again with mercury for two months. It is often necessary to give the third course of neoars-

\* **Kenneth L. Dole** (10 East Vine Street, Redlands, California). M. D. Harvard, 1915; Scientific organizations: San Bernardino County Medical Society, C. M. A., A. M. A.

\* **A. E. Edgerton** (Taft, California). M. D. Jefferson Medical College, 1914. Graduate study: Philadelphia Polyclinic, 1917 (summer). French Hospital, San Francisco, 1914-15. Pathologist State Hospital, Stockton, California, 1915-16. Previous honors: Captain Medical Corps U. S. Army, 1917-19. General practice. Hospital connections: West Side Hospital, Taft, California.

\* **Dan H. Moulton** (Chico, California). M. D. University of California, 1902. Graduate study: Internship Sacramento County Hospital, New York Polyclinic, New York Postgraduate School. Practice limited to Surgery since 1903. Hospital connections: Euloe Hospital, Chico; Euloe Sanatorium, Paradise. Previous honors and services: Lieutenant-Commander U. S. N. R. F. M. C., 1918-19; Associate Chief Surgeon, Sacramento Northern Railway for twenty years; Examiner for U. S. Veterans' Bureau since 1919. Publications: "Treatment of Acute Poliomyelitis," Cal. State J. Med., 1912.



phenamin to be followed again with mercury. Later I use the bismuth compound and try to keep in touch with the patient until a cure is effected. Wassermann tests should be made every six months for the next three years, and subsequent treatment given according to the laboratory findings.

The most perfect of health boards is powerless until its functions are set in motion by the family physician. Protection from contagious disease presumes the ability to recognize contagious disease. If the physician whose aid is sought be ignorant or a quack, the whole community is endangered through his failure to make a correct diagnosis. This is the basic reason for the practice of medicine. Protection of the ignorant from exploitation is of but secondary importance; the credulous will ever find means for their own undoing. Outside the realm of communicable disease the average man has little concern with the medical fads of his neighbor. If he have lumbago he may go to a Turkish bath, or to a psychoanalyst, or to a physician, and it is no one's business but his own. Yet if his child have diphtheria it is the vital concern of the whole neighborhood that other children be kept out of the house. But diagnosis of diphtheria is a matter of medical education. It is not inherited nor acquired by occult means. The state doubts the ability of uneducated men who have taken a few lectures, or a correspondence course, when it comes to the public question of recognizing cases of communicable diseases. The concern of the public is not whether an excess of huckleberry pie is best cured by adjusting the fourteenth dorsal vertebra or by a dose of castor oil; its concern is whether Doctor Quack, the renowned healer, knows a case of measles when he sees it.—New York Times.

The onlooker can see a great deal of the game. And I, for instance, though I claim no insight into pure science, can fairly claim an onlooker's experience of very many practical instances of science as applied to the needs of our civilization today. For some years past, in war and in peace, I have been privileged to have countless opportunities of examining at close quarters the concrete results of such applied science. In things military and naval, in factories, workshops, mines, railroads, in contact with the everyday problems of education, health, land-settlement, agriculture, transport or housing—in all such varied departments of human life, it has been borne in on me more and more that if civilization is to go on, it can only progress along a road of which the foundations have been laid by scientific thought and research. More than that, I have come to realize that the future solution of practically all the domestic and social difficulties with which we have to grapple nowadays will only be found by scientific methods.—From the presidential address of the Prince of Wales, British Association for the Advancement of Science, Science, August, 1926.

At a medical meeting in Wisconsin, following a discussion on periodic examination of apparently healthy persons, it was asked how many physicians present had been examined within the past year. Three of the seventy present raised their hands. It was pointed out that hardly a month passes but that some physician, dear to his friends and apparently in the prime of his life, suddenly drops from the ranks, and oftentimes from a purely preventable disease. It does not look well for medical men to urge periodic examinations of the apparently healthy when they themselves do not follow the advice given.—J. Indiana M. A., August, 1926.

It is not only in the works of fiction and of the imagination that one need look for drama, but the thread of romance can be traced now running bright, now less bright throughout every aspect of the all-absorbing study of man. That the mysteries of the human body form no exception to this rule is readily seen in the fact that from time immemorial it has been the aim of the student and the investigator to fathom the hidden things, and even down to our own times the revelations they uncover partake of the spectacular, nay almost of the unreal.—John B. Deaver, J. Iowa M. Soc., August, 1926.

## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

### REPORT OF A CASE OF URTICARIA PIGMENTOSA IN A YOUNG ADULT

By MERLIN T-R. MAYNARD \*

Urticaria pigmentosa is rare, and in adults is rare enough to justify an individual case report. About 150 such cases have been reported during the past forty years. These patients always arouse interest, and in view of the distinct character of the disease competent dermatologists rarely fail to make the diagnosis.

The gross lesions are those of pigmented macules or papules or mixed lesions which on irritation respond with an urticaria-like reaction of itching and weal formation. The macules may or may not be the result of an initial nonpigmented lesion, but pigmentation, however, rapidly develops, rarely fades, and the response to irritation is not lost even in old lesions. Distribution is largely on the flexural surfaces; the face, palms, and soles are rarely involved. The normal skin likewise often produces a dermatographism. A biopsy shows typical features not found in chronic pigmented urticarial lesions and which, therefore, differentiate this disease from the not infrequent chronic form of urticaria.

Nettleship reported the first case of urticaria pigmentosa in 1869. His patient was a female child of 2 years, and his paper was entitled "Chronic Urticaria Leaving Brown Stains of Nearly Two Years' Duration." Unna later demonstrated mast cells in increased numbers in urticarias of the Nettleship type, and this established our present basis of classification. However, there are reports of clinically typical instances of the diseases without mast cells, and since mast cells occur in various conditions it is possible that their presence in urticaria pigmentosa may be a usual but not a necessary characteristic. It would seem, therefore, with typical symptoms and an otherwise consistent microscopic picture that, regardless of mast cells, a positive diagnosis is justifiable. However, repeated biopsies should be made because clinical phases and seasonal changes may shed new light on the occurrence or lack of occurrence of these cells.

As published case reports are very complete, and the diagnostic features and histopathology often repeated in the literature, their further review except as will be brought out in the discussion of my case is not essential.

#### CASE REPORT

Helen S., Italian housewife, 29, examined in 1923, and the diagnosis of urticaria pigmentosa made on the clinical appearance. The patient did not return, but was traced and returned at my request in January, 1926. The skin condition as far as I could remember was unchanged. The history given was that of onset at the age of 20. The initial lesions beginning on the left wrist on the flexor surface, as several hive-like spots, following the rough grasping of the wrist by a schoolmate. These did not subside, but became rapidly darkened and soon more began to appear, first on the wrist and then gradually over the body in the present distribution. The left wrist still is the most severely involved area of the body. The patient is of sturdy Italian peasant stock. There is neither history of a similar eruption nor other significant fact in any known member of the family. No serum has been given at any time, and patient was successfully vacci-

\* Merlin T-R. Maynard (Twohy Building, San Jose, California). M. D. Washington University Medical School, 1922. A. B. Leland Stanford University, 1919. Graduate study: Stanford University Medical School Skin Clinic, 1924-26. Intern Lane Hospital, 1922-23. Previous honors: Diplomate of National Board, 1923. Present hospital connections: Acting dermatologist (visiting) San Francisco Hospital; staff San Jose Hospital and O'Connor Sanitarium, San Jose. Present scientific organizations: Member Santa Clara County Medical Society, C. M. A., A. M. A. Present appointments: Clinical instructor medicine (dermatology) Stanford Medical School; acting visiting dermatologist San Francisco Hospital. Practice limited to Dermatology since March, 1926. Publications: "Warts," Better Health Magazine.

nated in childhood and not since. The patient has never had previous "hives." For two years before onset the patient had digestive symptoms consisting of nausea and



Adult urticaria pigmentosa. The response to stimulation is not well shown.



Photomicrograph of section from a case of adult urticaria pigmentosa. The deeper staining stellate cells are mast cells. The perivascular arrangement is apparent.

flatulence after meals, and other symptoms being strongly suggestive of chronic gall bladder or appendiceal disease. Roentgen examination of the gall bladder region was negative, but a laparotomy in 1923 disclosed chronic appendicitis with adhesions, and one year later a second laparotomy was done for persistence of symptoms and many adhesions were freed. The gall bladder and other abdominal organs were considered normal. The general symptoms were somewhat abated, but the skin condition did not alter.

**Physical Examination**—The skin presents many lesions of freckle-like appearance, deep brown, round, split-pea size, rather discrete but closely placed, very few being confluent. They are slightly palpable and rather symmetrical in distribution. The greatest concentration of the lesions is on the flexures, the wrists, upper arm and above the knees, the ankles are thickly massed with spots, and the rest of the body is thickly massed with similar-appearing macules. The face, however, is apparently free, as are the palms and soles. The abdomen shows two laparotomy scars, one frankly keloidal, the other showing beginning hypertrophy. There are no scratches or other scars. The normal skin is definitely dermatographic, and when the lesions are rubbed an almost instantaneous change takes place in which each lentiginous lesion rapidly swells, deepens to a purplish tint and becomes frankly urticarial. This phenomenon is exceedingly striking. The wheals persist for a short time and then subside. They are almost immediately blanched by the injection of adrenalin locally, and even the most insignificant lesion of long standing changes to an active weal on irritation.

Other abnormalities found on examination were chronic infiltration of the tonsils, the thyroid distinctly enlarged of the parenchymatous type without signs of toxicity. The abdomen is slightly tender in the region of the cecum and in the right upper quadrant.

Microscopical examination of a lesion by the lesion by the right knee, including some normal skin, shows normal squamous granular and prickle cell layers. The basal layers show a distinct pigment capping, which is considerably increased in the area of the lesion. The papillae are normal and the vessels of the corium there are prominent. There is likewise some intercellular edema and throughout the corium there are numerous mast cells with a distinct tendency toward grouping around the vessels in the area of the lesion. The normal skin likewise shows an increase in these cells to a lesser degree, many of which show degenerative changes with a spilling of their granules into the tissue spaces.

The clinical and microscopic pictures are distinctly those of urticaria pigmentosa, a diagnosis which has been confirmed by several dermatologists who have seen the patient with me.

The most prominent factors are the mast cells and their distribution in the normal and pathological areas. There are found many degenerating mast cells with spilled granules. The mast cells are increased in the normal skin, and the epidermis itself is unchanged. The pigmentation is due to melanin and not to the mast cells as shown by the unstained sections. The distribution of the lesions with the rapid subsidence with rest or adrenalin injection, and the persistence of the pigment with the urticarial response to irritation regardless of the age of the lesions and the general dermatographism, make a complete picture. The tendency to keloids is interesting.

Treatment has been corrective and directed toward relieving the gastrointestinal symptoms. The prognosis is, of course, poor, but the patient is fortunately not greatly bothered by her lesions.

The sterilization act of Virginia has been upheld by the Supreme Court of that state. According to the provisions of the law it is possible for the board of directors of the state colony for epileptics and feeble-minded to sterilize sexually any person under state custodial care who is feeble-minded or an epileptic and able to procreate his or her kind. There has been much objection to these sterilization acts, but in reality most of the arguments advanced are not worthy of very serious consideration. On the whole the medical profession is in sympathy with sterilization acts that are prepared and enforced intelligently.—J. Indiana M. A., August, 1926.



## EDITORIALS

### DOES EVOLUTION APPLY TO THE LIVING CAUSES OF DISEASE?

If evolution influences man, monkeys, flowers and potatoes, may it not also apply to the minute microscopic animal and vegetable organisms that produce disease in their hosts?

Scientific and historical evidence supports the hypothesis. It is known that some diseases once active have disappeared and that others appear to be doing so. There are, of course, other reasons than evolution which could be and are being advanced to explain this phenomenon, but they do not explain what appears to be the occasional rise of a new disease or possibly the reappearance of an old one in an unrecognizable dress.

The theory that evolution applies to living causes of disease is to the fore again in scientific literature as an explanation of the disease variously termed, encephalitis lethargica, epidemic encephalitis, contagious encephalitis, post-influenza encephalitis and, most incorrectly, "sleeping sickness."

At least in its present form this disease is less than ten years old. In that time it has invaded thousands of communities in practically every country in the world, and apparently is only in its infancy, either in prevalence or in the harm it may yet do to the human race. In searching for the cause, all sorts of hypotheses are being put forth for testing, and all sorts of experiments are being planned and executed.

Two well-known and careful students have recently seriously advanced the hypothesis that the extensive occurrence during the last few years "argues much for the evolutionary theory of the malady. *We are too apt to forget that evolution proceeds ever onward, and that side by side with the elimination of old diseases, new diseases may appear or reappear after long absence through the originating of a species of organisms hostile to man, or alternatively, by reason of the taking on of inimical parasitic function by a previously harmless saprophyte.*"

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### MEDICAL SECRETARIES

The duties, legal exactitudes and other responsibilities of physicians, hospitals, and laboratories are becoming so numerous and complex that doctors must have competent technical assistants or devote a large share of their time to matters which ought to be attended to by less expensively trained assistants. Among the important services needed by individual physicians, groups, laboratories, clinics, hospitals, are:

**Better Business Methods.**—Next to ministers and farmers, doctors as a class are the poorest of business people, a trite statement but a fact. No one who loves his profession wants to see business methods and business ethics applied in medicine to a point where they may interfere with the art and spirit of a great calling, nor is this necessary. But it is advisable for doctors and other health-serving agencies

to keep a written record of their work, including service contributions to society, in a businesslike manner.

**Better Professional Records.**—Every doctor and other health-serving agency owes it to patients, the cause, and to himself and to posterity, to keep a clear, properly indexed typewritten record of every service rendered to every person.

**Better Library Service.**—Well-arranged books, handy for reference, contributes to their use and, far more important, selected articles and abstracts from periodic literature must be kept readily available. No doctor who has anything else to do can read all the literature even within the field of his interests, but it is a simple matter to glance through all that is available, whether one magazine or a thousand, and check such messages as he feels he may need. These should be made easily accessible for future reference. Stocks of old unopened medical journals in the many doctors' offices are proverbial and they tell an interesting story to any intelligent and observing patient or visitor; often an expensive one to the doctor.

**Better Laboratory Service.**—Whatever a doctor's connection with established laboratories, certain equipment and certain routine and emergency work are essential in his office. The care of the equipment and much of the work may well be delegated.

**Better Literary Work.**—Most physicians have the praiseworthy desire to contribute things of value to the cause of health and they all have experiences valuable to the medical world if they are well told. Competent assistance would prove a stimulant to more and better literary effort.

**Better Correspondence.**—Doctors are notoriously negligent in their correspondence. Too many of them do not answer letters from their own organizations, even when the matter is of direct personal interest to the individual doctor. Next to the publication of worthwhile discussions on interesting medical topics, the most valuable ethical means open to a doctor of extending his influence is through intelligent promotion of his correspondence.

**Personal Protection.**—Anyone who examines newspaper clippings about doctors is forced to the conclusion that it is becoming increasingly hazardous to make a practice of being alone with patients.

For these and many other reasons that readily occur to the reader one or more competent personal assistants are valuable assets, if indeed not a necessity, for every physician. In hospitals and groups these assistants perforce are grouped in specialized work of considerable variety, but all synchronized and amalgamated for the physician's use in serving the public.

The physician's assistant or secretary, whether serving the versatile requirements of a family physician's life or doing more limited work in hospital, laboratory or group, must be versatile in her accomplishments and well trained along several lines in addition to having the fundamental characteristics of loyalty, intelligence, industry and neatness. As physicians specialize, so do their assistants, but in both instances a primary experience in general practice is more than desirable and will constitute a life's work for the vast majority.

### "OVER THE HILLS TO THE POOR HOUSE"

The exposé of "Poor House" conditions, based on the recent study of the Federal Department of Labor, with some sixteen other organizations co-operating, has stunned people from one end of our country to the other, and well it might. Newspapers have featured the findings in news columns and editorials and review magazines have given much space to the high lights of the report.

The report is of the type which a few years ago would have been classed as muck-raking. Perhaps it is, but when there is nothing to rake but muck its stirring up may be the only method of securing improvement in an intolerable condition.

One of these days someone will study the situation and make a similar report about county hospitals, too many of which are but glorified—or unglorified—poor farms. In fact, so closely blended are these government agencies that it is difficult to understand how the hospitals escaped the investigator who made the recent report of a situation that smells to heaven.

Mr. Harry C. Evans, who did the investigating, thus sums up his charges against present poor-farm methods:

"1. The inhumane practice of setting up a special place or building and labeling it, to which the unfortunate, intelligent poor must go or starve.

"2. The poor-farms and their helpless inmates are a part of the political spoils of the community. The superintendent, manager, or overseer of the poor, is usually appointed because he is influential in politics, or because he will take the job for less pay than any one else, and not because of his special fitness for the work.

"3. The practice of sending hospital cases, the feeble-minded, the insane, the deaf and dumb, the blind, to poor-farms.

"4. The practice of sending paupers to convict camps.

"5. The practice of sentencing criminals to poor-farms.

"6. The practice of sending children to poor-farms.

"7. The lack of intelligent records showing cost of maintenance, value and disposition of crops, conditions of buildings, necessary additions, repairs and improvements, farm and building statistics, mental and physical conditions and case history of inmates.

"8. The maintenance of poor-farms that are dangerous fire-traps.

"9. The maintenance of poor-farms that are unsanitary and filthy.

"10. The gross neglect of inmates.

"11. The release of feeble-minded and contaminating, diseased inmates, and those having hereditary diseases, without record of their past or control of their future.

"12. The contract system under which the keep of paupers is let to the lowest bidder.

"13. The expensive practice of maintaining scores of poor-farms in a state when one would render more efficient, more economical, more scientific service."

In all this mess of depressing and even revolting

details many editors emphasize the tragedy of placing children in such environment.

"In 1922 more than 6000 children were admitted to the poor-farms of the United States—3094 boys and 3131 girls. In every ten years 60,000 children, according to Mr. Evans, are sent to poor-farms, where the contacts are in nearly all cases demoralizing:

"What these children need are homes, not institutions; doctors and nurses, not caretakers; personal attention, not attention en masse; the personal touch and care of men and women, rather than the mechanical authority of an institution or the state."

Many of these children need, in addition to homes, hospital facilities where doctors and nurses may serve effectively. Obviously, counties should provide these facilities or stand the cost of their purchase from those who have them to sell. It is to meet just this condition that the Federated Women's Clubs of California, under the leadership of their president, Dr. Mariana Bertola, are making the campaign for a children's department in every county hospital for the care of children who need care and whose parents are unable to purchase it "at the market."

This is child welfare at its best. It is well enough to complain that many of the defects and infirmities of children are preventable and to take steps calculated to make prevention effective at some future date, but in the meantime why not take care of the thousands of children who need expert medical care now in a hospital and who are unable to pay for it? Doctors and nurses realize the futility of much medical care given in clinics and even in doctors' offices, because enough hospital beds in worthy institutions are not available for the poor, particularly in less congested communities.

We are glad to see that a children's department in each of the thirty-odd county hospitals of California, with adequate facilities and personnel to serve the financially, physically and mentally crippled, is to be a major activity of the women's clubs for at least another year, truly a Herculean task, and it may be necessary to do some plain speaking before it is accomplished.

### WHO'S WHO IN THE M. O. R. C.

The first edition of the Directory of Medical Department Reserve Officers of the Ninth Corps Area, embracing California, Nevada, Utah, Washington, Oregon, Montana, Idaho, Wyoming, Alaska, has been issued by Colonel E. L. Munson, Corps Area Surgeon. The directory contains the names, addresses, rank, and detail of 1216 medical officers and 94 dental, veterinary, and other officers assigned to medical units. It shows the extent to which the movement has already developed, and its roster of names discloses the high class of men who have enrolled for patriotic service in any national emergency, and thus constitutes a Who's Who that reflects credit on the physicians of the west.

There are still several hundred vacancies in this service, which indicates that many doctors in active life have not availed themselves of the opportunity to align themselves with a patriotic public service which at the same time has far-reaching personal values.



## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

Doctors who have the interests of their profession at heart will find in Rexwald Brown's article on page 465 of this issue a clear exposition of a problem the correct solution of which is of primary importance to the future of our profession and to the welfare of society.

They say that in these states (Florida, North Carolina, Louisiana, and Texas) people who never before heard of evolution are inquiring into it, finding it interesting. Boys, denied the forbidden subject at school, furtively read about evolution from booklegged treatises, down behind the barn, where their fathers once read "Pluck and Luck," "Fred Fearnot," and "Diamond Dick," the while smoking cigarettes concocted of cornsilk.

To forbid is to recommend. These state legislatures are doing a great work for evolution.—Scientific American, September, 1926.

Letters of candidates for offices, which form a large part of a doctor's mail these days, make varied and sundry announcements and claims; some humorous, some pathetic, and some just plain Americana. A candidate for the office of coroner in one county includes this in his platform:

"Some people have the mistaken idea that the duties of coroner can be performed only by a doctor. This is not so. The coroner is not allowed by law to personally perform an autopsy, but must employ some doctor for that purpose. The coroner has nothing to do with the burial of the dead except to see that some undertaker does it. He has nothing to do with the determination of the cause of death except to call a coroner's jury for that purpose, and this jury from the testimony of other witnesses determines the cause of death. Where a knowledge of medicine is necessary a doctor is called as a witness. And the law does NOT require that a coroner shall be a doctor.

"I do not believe in unnecessary autopsies. If elected to the office of coroner I will respect the feelings of relatives in this regard, and only where the law or justice requires will an autopsy be performed."

Pre-;;!?.—Pre, according to lexicographers, means "before." To prejudge, according to the same accepted authorities, is "to judge before full and sufficient examination."

Diagnosis, like other judgments, should be based on evidence and with all facts before us. What, Oh Lord, is preclinical diagnosis? Like a lot of other pre's, it is promoted to euchre the physician out of some more of his responsibilities and patients and assign them to another class of "specialists" who are not governed by the laws of the land.

Pre, in its many ramifications, is something well worth thinking about. This perfectly good prefix has been promoted for selfish purposes until we now see huge signs about pre pre this, that and the other thing.

And some doctors fall for it!!

Picture, if you can, a country doctor in the year 1809 traveling sixty miles on horseback on a winter's day to see a patient whose strength was being sapped by the ravages of a pelvic tumor. The results of this visit are memorable alike for their far-reaching effect, as for the audacity of a surgeon and the courage of a woman. We next see this woman on a bleak day in December, 1809, "with her pendulous abdomen resting on the pommel of her saddle" riding those same sixty miles, a two or three days' journey, into Danville, Kentucky, there to submit

to the momentous experiment that was to supply the foundation for modern abdominal surgery. The central figures in these two pictures are Ephriam McDowell, the fearless surgeon, and Jane Todd Crawford, the heroic woman. Their story is indeed worthy of the pen of the novelist.—John B. Deaver, J. Iowa M. Soc., August, 1926.

Progressive medicine and the world has lost a great leader, and thousands of physicians a helpful friend, in the passing of John G. Adami on August 29, age 64. Doctor Adami at the time of his death was vice-chancellor of Liverpool University.

Our cities will secure clean milk instead of cleaned milk just as fast as they learn what the problem really is. Physicians and health officials working with farsighted milk dealers can bring good milk to the attention of any city in short order. May the motto "Clean Milk, Not Cleaned Milk" guide more health departments in their future undertakings.—Illinois M. J., August, 1926.

The states should not be induced by coercion or by favor to surrender the management of their own affairs. The federal government ought to resist the tendency to be loaded up with duties which the states should perform. It does not follow that because something ought to be done the national government ought to do it.—President Coolidge.

One person out of every nineteen "gainfully employed" in this country draws his salary from public coffers.

There are between 2,500,000 and 3,000,000 persons on federal, state, and municipal payrolls.

Each American family contributes an average of \$123 a year from its income for the support of these jobholders.—Dearborn Independent, September 11, 1926.

Physicians interested in carbon monoxide poisoning will find an unusually complete review of the literature and some discussion of the subject in the Bulletin New York Academy of Medicine, August, 1926.

Some reader sends us the following clipping with the suggestion that doctors will enjoy it: A machine broke down. The operator, the foreman, and the plant engineer could not start it.

The expert took one quick look at the machine, tapped it several times with a hammer and told the operator to start it.

His bill was for \$250. When the superintendent asked for an itemized statement he got this:

Tapping with a hammer.....	\$ 1.00
Knowing where to tap.....	249.00
Total .....	\$250.00

"Radio Consultation," headlines over a story about some doctor being called from New York to London to "save the life" of a moving picture "magnate."

Some "consultants" are like that; they want to do all the talking and they want the world to hear them.

In spite of the fact that scientific medical bodies endorse vaccination to prevent smallpox, how many physicians advise their clientele to have the babies vaccinated when they are six months of age? Most of them wait

until the mother brings the child to the doctor stating that the school will not admit the child unless vaccinated. Furthermore, despite the fact that toxin-antitoxin is recognized as a preventive of diphtheria, how many physicians urge it in the families which they attend.—Health News, New York.

Facts about health are distributed to the public at large by the million. The dissemination of these facts is undoubtedly advantageous. Will an increased volume of health intelligence for the public at large ultimately enable the average individual thus exposed to make sound health judgments, Will we, by expanding our facilities in this quantitative way, ultimately furnish the basis for a practically universal sound value judgment as to what constitutes authentic information, and a reliable source of advice? Will something in addition have to be done to establish a confidence in scientific procedure, a reliance upon expert guidance, with the elimination of the existing popular antipathy to the expert in any field?—Boston M. and S. J., August 12, 1926.

In an address before the Royal Institute of Public Health, on the nature of malignancy, George Adami (Med. Jour. and Record, August 18, 1926), delivered one of his usual carefully prepared messages which should be seriously studied by every physician.

There is so much so-called scientific twaddle being fed to doctors and the public these days that it is only occasional clean-cut logical analyses like that of Chancellor Adami that keeps us safe from the position of John Byrom, whom the distinguished pathologist credits with: "Big fleas have little fleas upon their backs to bite 'em, And little fleas still lesser fleas, and so *ad infinitum*."

As may well be imagined, the work of this bureau (A. M. A., Bureau of Investigation) has met with bitter opposition. At one time suits for libel totaling almost thirteen million dollars were filed against the association for its courage in bringing to light the schemes of unprincipled promoters. Only one of these suits ever came to trial; the court damages amounted to but one cent, and the plaintiff paid his own costs. Even today two suits for one hundred thousand dollars each await action by the courts: one the case of a remedy promoted as a cure for cancer, the other a device issued with extravagant claims to persons who are deaf.—Morris Fishbein, The Century Magazine, August, 1926.

"The Chiro-Vox absolutely proves that there may be an apparent displacement without an impingement and that there may be a severe pressure that is doing untold harm, without any apparent displacement, even when such displacement cannot be detected either with the x-ray or by local palpitation."

This is one paragraph in the display advertising of a chiropractor in a metropolitan newspaper. The ad is headed "Listening in on Nerves," and the advertiser admits that it "may read like a fairly tale." It does.

I think the time has come when we ought to educate the people to consult well-trained men—and please get this statement right—I think the time has come when we ought to educate the people to consult well-trained men rather than to try to teach these people how to diagnose angina pectoris.—C. W. Waggoner, Ohio State M. J., September, 1926.

Newspapers round the world carried extracts from the Prince of Wales' postprandial address at the annual dinner of the British National Association for the Prevention of Tuberculosis held recently. An excellent message it was too, but the speaker had bad advice when he said that tuberculosis was a penalty of civilization and that it was hardly known among savage men and wild animals. This is not a fact, and the statement was the "news feature" of the address.

A valuable point was made in the epigrammatic state-

ment, "If (tuberculosis) preventable, why not prevented?" and again, "What has been introduced may be removed."

Such men (pioneers) fight the campaigns of the future over and over again in their thoughts while all the world around them is at peace; and when the time comes at last, though they themselves be gone, the roads they planned are broad and straight for the march of other feet; the sword they forged lies ready for another hand; the spirit they called up still lives, and they themselves, in their graves, in their well-earned rest, have a share in the victories which humanize mankind.—C. W. Waggoner, Ohio State M. J., September, 1926.

"Time," the attractive little news weekly with a big circulation, devotes three columns of its limited space (September 13) to lightly chiding physicians for their alleged timidity in helping the newspapers educate the public in medical matters, and in particular because they refuse to enter into newspaper debates with faddists and doctors with axes to grind.

"Time's" statement that "newspapers tend to print every scrap of medical information they can get" will make the initiated smile. Millions of words of medical information are published monthly in hundreds of legitimate magazines and reports. The American Medical Association publishes a popular health magazine and issues a clip sheet of interesting and attractive medical information to hundreds of newspapers, only a comparatively few of which pay any attention to this reliable information. Too many of them, and apparently "Time" also, consider a statement of Arbutnot Lane on a controversial subject medical information for the public, and they promote Lane further by eulogy and the publication of his picture.

"Time" also apparently considers as medical news the statement of Charles Mayo (given under what purports to be his picture) that Valentino died of septicemia. The bulletins issued by Valentino's physicians apparently were not news.

There is more of the same sort of "news" cleverly designed to discredit the conduct and by implication the motives of physicians because they refuse to enter newspaper controversies about health.

All the useful information any newspaper or "Time" wants may be obtained regularly if they will only ask the American Medical and other medical organizations.

Sir James Barrie, speaking the other day at a banquet for the Australian cricketers in England, spoke whimsically of one of those who, having set out upon the long journey of the dead, paused to lean his elbows on the village gate and watch the cricket match on the green. "What a terrible thing if he had to rejoin his fellows feeling that we, his successors, were not playing the game." Try as we will, we may not evade the responsibility we owe to those who have passed along this way ahead of us.—T. Wingate Todd, Science, September 3, 1926.

Thirty-one per cent of all hospital treatment in the United States in 1923 was given free and 19.3 per cent was only partly paid for.—Bull. of the Wayne County Med. Soc., September, 1926.

On account of changed standards of living in Germany, about 85 per cent of the sick take advantage of their privileges as members of city and state clinics, for their services in which doctors are paid either a low salary or a minimum fee amounting to about 20 cents per patient.

The increase in the number of doctors is accounted for by the advantages offered during the war to those wishing to take a course of instruction. Doctors are collected thickest in Berlin, where there is one for each hundred persons.—New York Times.

There is almost daily evidence that physical therapy is rapidly "living down its past" reputation and finding its place among the reputable therapeutic measures.—Internat. Med. Digest, August, 1926.



## MEDICAL ECONOMICS AND PUBLIC HEALTH

Physicians have invariably waited for the other fellow to organize them into active, potential forces, as far as the economic side of medicine is concerned. That condition occurred in Germany, and it happened in England, which heterogeneously scrambled medical sociology and the insurance business, with its lay control of medical practice; and the same invasion now threatens the integrity of the American medical profession.—*Ther. Gaz.*, August, 1926.

When a child is not feeling well no one will know this condition sooner than the parents. This should be sufficient reason for seeing the family physician.

Those who must be "baited with an opportunity for free services" seldom receive the full significance of "free service." The very fact they waited for a free clinic indicates that they have knowledge of the need for medical services.

It is far better that these people receive information about the fallacies and hazards of unqualified practitioners and the "cure-alls" than it is to hand them free services in a spectacular publicity campaign.—*Ohio State M. J.*, September, 1926.

Three years ago the women physicians of the San Diego County Medical Society who were in charge of health committees of various women's organizations called a special meeting to discuss plans for better co-ordination of the health work of all clubs. After consultation with the council of the medical society, the president of the dental society, the public health nurses, and the president of the most active women's clubs, the medical women decided to carry out a yearly program of baby health conferences under the auspices of a few of the clubs, but with the co-operation of all others interested. To this end there was formed a central group known as the San Diego County Public Health Committee with a membership limited to the presidents of the organizations interested in health work and the chairman of their public health or welfare committees.

The following lay groups were represented: County Federation of Women's Clubs, District Parent-Teachers' Association, City Parent-Teachers' Association, Catholic Charities, Chamber of Commerce, Red Cross, Farm Bureau, Education (through the County Superintendent of Schools, Civic Center, Associated Charities, etc.).

Representing organized medicine were the San Diego County Medical Society, San Diego County Dental Society, City Board of Health, County Physician, San Diego County Nurses' Association, and the San Diego County Public Nurses' Association.

Meetings were held monthly at which all work done during the past month was reported and plans for the next month presented and discussed. Every health question touching San Diego County was considered at these meetings, and the decisions reported back to the members of all the organizations in the county by their representative on the committee.

The successful work carried forward by this organization makes it evident that women physicians, with the power of the organized minority behind them, and through their positions as chairmen of public health and child welfare committees in the women's organizations, rightly using their influence, can become a strong connecting link between organized medicine and organized women, and a powerful factor in public health education and public health legislation.

Dr. Martha Welpton, who is an active leader in this work, says that "over 50 per cent of organized women's groups are doing public health work, and are depending on the doctors of medicine to give the service. We are giving it to thousands, but as individuals, not as representatives of a regular group of scientific persons. I believe the fault is our own; and I also believe we can overcome it. The clubs are all open to us; they are will-

ing to co-operate and, in fact, have been co-operating for years."

To get rid of the cults it is for us to educate the people of the United States medically; but to get rid of the free clinics for the rich and poor we have to educate ourselves. Let every physician refuse to attend any outpatient department that is competing and taking away the very bread and butter of his fellow-practitioner.

The carpenter and painter are always fighting honorably for their bread and butter, but the physician, who works seven days per week and twenty-four hours a day getting paid at times, thinks it is below his dignity to fight for his interest. Thousands of my fellow-physicians will agree with me that it is absolutely wrong for any institution to give medical aid to those that can afford to pay a doctor. At every clinic of this city we find men and women of considerable wealth looking for charity. To meet real estate men or bootleggers at the outpatient department is a very common thing.

For the sake of the real poor patients who deserve charity, for the sake of our fellow-practitioners who deserve an honest, decent living, I urge the Massachusetts Medical Society to follow the action and resolutions recently passed by the Missouri Medical Society: "That every patient will have to produce a statement from two reputable citizens that the patient applying for treatment is not able to pay for such treatment."

Charity to the poor, but justice to all.—*William Frankman*, Boston M. and S. J., August, 1926.

We are having a taste of what our own state can do in the way of treading upon the toes of the private practitioner of medicine through the gratuitous service that is rendered by the Indiana State Board of Health in direct competition with laboratories and private practitioners of medicine. In reality there is ample evidence to prove that some sanitariums and private practitioners of medicine are taking advantage of the free service of the state by charging their patients for it. This places the burden of responsibility for the growth of state medicine upon the medical profession as well as upon the public health officials, and it is time for an accounting. We have no objection to the services rendered by the state for the indigent, but we do object to the state putting itself in competition with the private practitioners of medicine by taking pay patients from the latter, to say nothing of helping to pauperize and make dependent those who should be self-respecting and self-supporting.—*J. Indiana M. A.*

The liberality with which the Workmen's Compensation Act is interpreted by the Industrial Accident Commission and the Appellate Courts of California. In the case of Rader vs. The County of Monterey, decided by the Supreme Court of California last week, the court affirmed the Industrial Accident Commission's award of a death benefit of \$4900 to Nellie Pearl Rader, the minor daughter of R. N. Rader, a citizen of Salinas, who was killed by rum-runners at Moss Landing on the night of July 6, 1925. The decision is important in that it assures proper compensation to the dependents of men who lose their lives by reason of being impressed into service by peace officers in their work of crime suppression.

The decline in the birth rate which has taken place during the past quarter of a century throughout the civilized world is especially prominent in the United States. As to the factors causing this decline in birth rate there is hardly any question that the restriction of immigrants during the very recent years, the dodging of parental responsibilities, the seeking of personal comfort and the propaganda on birth control have all been responsible in part.

The distinction of having the highest birth rate was earned by Detroit with a rate of 25.79 per 100,000 of the population. San Francisco had the lowest rate of 12.75, and as a low infant mortality rate goes hand in hand with a low birth rate, it is not surprising that it made the best showing of all the cities as to infant mortality. Los Angeles was the next lowest of 15.55. The rate in

New York City was 20.60.—Bull. City of New York Department of Health.

At last, at last! More and more do we find medical men awakening to the fact that the profession is face to face with efforts on the part of industrial and commercial organizations to take over the practice of medicine, and destroy the personal relation of doctor and patient, upon which the safety of both depends. Some of the eastern medical societies, through their bulletins, are advocating a complete reorganization of the medical profession with the idea of making better doctors of those already in practice, and uniting them more thoroughly with any plan for economic protection. Let the good work go on.—J. Indiana M. A., August, 1926.

The gentleman in charge of rehabilitation work in a certain section said, "Do you know that I have gotten all the doctors of the state to agree to take care of all these cases, do all the rehabilitation work free of charge." And he was asked, "What is your salary?" He said, "I am getting \$6000 a year." He was asked, "Are the nurses paid?" "Yes." "Are the buildings where you are doing this work paid for?" "Yes." Everybody is paid, but the doctors of North Carolina are not being paid.—C. W. Waggoner, Ohio State M. J., September, 1926.

The fact that there has been no significant improvement in maternal mortality rates during the first six months of 1926 should provoke inquiry. What could have been expected of the maternity work which was instituted with such fervor and zeal ten years ago? Was it founded upon sound principles, were its aims realizable, and was there a program sufficiently comprehensive to affect the vast number of maternity cases which occur annually in the area under survey? Or, have new factors intervened to offset the work of boards of health and of private agencies? Has the increased proportion of hospitalized cases been accompanied by more septic complications? Whatever be the answers to these and other questions which arise, it is clear that over the past decade little if any impression seems to have been made upon the risk of death in child-bearing.—Statistical Bulletin, Metropolitan Life Insurance Company.

The University of Wisconsin, one of the foremost educational institutions of this country, is teaching its students what it is to have communal medicine, and what a great and wonderful thing it would be if a county or a state could pass a law—and this institution has eight or ten thousand students—whereby the patient could be treated for a cost of from fifty cents to a dollar a year. And that propaganda is going out over the country not only from that institution, but many others in which they are being taught what a wonderful thing it would be.—C. W. Waggoner, Ohio State M. J., September, 1926.

Up to the close of 1916 only fourteen full-time county health units were functioning in the United States. At the close of 1925 there were 299 full-time county health units in operation in thirty-three states, and 80 per cent of these had been established in the preceding six years.—Rockefeller Foundation, 1925 Annual Report, International Health Board.

In North Carolina, Alabama, and Ohio over 50 per cent of the total population is served by full-time county health units.—Rockefeller Foundation, International Health Board.

**Our Maternal and Paternal Government**—If the conscientious mother would prepare her child's school luncheon with the help of the Federal Government, she may get that help from either the Treasury Department, the Department of Agriculture, or the Department of the Interior.

The first named, through its Public Health Service, will furnish her with "Nutrition and Education."

The second, through its Bureau of Home Economics, will respond with "School Lunches."

The third, through its Bureau of Education, will send "Diet for the School Child."

Does the subject of milk for the growing child concern her, she may ask for:

"Milk, the Indispensable Food for Children," from the Children's Bureau of the Department of Labor.

"Milk and Our School Children," from the Bureau of Education of the Department of the Interior.

"Safe Milk, an Important Food Problem," from the Public Health Service of the Treasury Department.

"Milk and Its Uses in the Home," from the Bureau of Home Economics, of the Department of Agriculture.

Or would you learn to protect yourself from deadly carbon monoxide gas in garages, you can turn to the Public Health Service, the Bureau of Mines or the Bureau of Labor Statistics, and each will gladly send you a bulletin.

Some six government bureaus deal with tuberculosis prevention; three departments and an independent board are working on rural hygiene; four departments and some independent bureaus have an eye on sanitary engineering.

We round up these facts from "National Government and Public Health," written by James A. Tobey and published by the Institute for Government Health. Mr. Tobey's 400 pages are largely an argument for a central division or department of public health. To us they were more interesting for their striking instances of how government activities multiply and duplicate.—Editorial, Nation's Business, September, 1926.

A pension system is exactly the same thing, mathematically, as a depreciation account for a piece of machinery. No sensible business man trusts to luck to be able to retire a worn-out machine and buy a new one out of current earnings. He sets up a reserve for depreciation the moment he installs the machine. For exactly the same reason, he should set up a reserve for future pension the moment he employs a new workman.

The mathematics of the whole subject has been worked out by the larger life insurance companies, and information can be had from them upon request. Certainly no employer who has in effect or is contemplating an industrial pension system can afford not to know these mathematics. He can then, with confidence in the future, join the far-sighted movement which will probably head off the wasteful government-operated compulsory industrial pension systems now in effect in Europe and in some South American countries, gaining for himself the very practical benefits of a co-operation with his men that is self-respecting on both sides, and extremely valuable as a builder of efficiency and goodwill.—World's Work, September, 1926.

With the increase of organized charity there has followed an enormous increase in the pauper class. The mendacious who depend upon charity for the whole or a part of their needs find the present system of easy benevolence fruit ripe for their picking. Free clinics and other gratuities relating to sickness, added to ubiquitous health service, curtails to a tremendous degree the usefulness of the so-called family physician and makes a new aristocracy of pauper invalids.—Ohio State M. J., September, 1926.

The practice of medicine has gone along all through these centuries, every doctor a health officer and the highest aim of every doctor the prevention of disease. And as the application for the treatment of disease became more intricate and more complex, he saw that it was necessary to designate a part of his profession to that particular side of medicine—preventive. Whenever you try to destroy the standard which every doctor has tried to establish, you are raising a menace to the profession.—C. W. Waggoner, Ohio State M. J., September, 1926.

The doctors of Ohio are the health officers of Ohio, and only to the Ohio State Medical Association may you look with safety for proper instruction and proper en-



lightenment. And when you leave the Ohio State Medical Association for authority or advice, and when you neglect or ignore its suggestions and its welfare you are treading upon ground that is not safe, and you are throwing the people of the country into the greatest danger.—C. W. Waggoner, Ohio State M. J., September, 1926.

An instance of the gullibility of doctors is contained in the following report made by The Doctors Business Bureau to the C. M. A. recently. Names are omitted:

"At the request of Dr. — of Pomona, California, a member of your association, we have just made a preliminary investigation of the affairs of the —, and have obtained the following rather startling and almost unbelievable facts:

"Approximately 3000 doctors have been swindled outright of a sum believed to be in excess of \$100,000 within the past eighteen months. We learn that this concern was organized in March, 1925, by —, with headquarters in San Francisco. Solicitors were put in the field throughout the Pacific Coast states to obtain accounts for collection, almost the entire selling campaign being directed to doctors. The company purported to have a large amount of capital and represented to prospective clients that it would pay them outright 25 per cent of the entire list of accounts submitted as soon as the same could be verified, and furthermore would finance the debtors, enabling them to pay their accounts in full so that the client would obtain his money immediately.

"About July 1, we are informed, — absconded with the company's funds, approximately \$60,000, and the concern is now wholly insolvent. Only four or five clients ever received any money at all during this entire time, and these only because they threatened prosecution. Other clients were stalled off with notes and promises. The evidence seems to be quite conclusive that the intention from the very first was to defraud, as the company's first attempt to make collection was an offer to the debtor to accept 75 per cent of his account in full payment. Later all debtors were offered a 50 per cent settlement, and finally the company offered to sell each debtor his account at his own price. Up to the present time, we understand, no steps have been taken to apprehend —, who was last heard of in Canada.

"On account of the great number of doctors involved in this gross swindle, we are making this report to you for your information and for such use as you may care to make of it for the benefit of your members.

Very truly yours,

THE DOCTORS BUSINESS BUREAU  
J. A. Slaughter, Manager."

In London Sir William Arbuthnot Lane, surgeon, authority on intestinal disorders, found his photograph printed on 40,000 menus of Lyons restaurants. The printing was done without his knowledge. He needs no such publicity. Nor does such publicity injure his reputation, nor curtail his skill. None the less, the British Medical Association denounced him, even though he had resigned from it a year ago because of professional criticism of his disease prevention work.—*Time*, September 13, 1926.

For a time after a physician "resigns" from his medical association because of "professional criticism" his name may be valuable to newspapers, on menu cards, and as an endorser of this or that method or remedy, but the time of such public popularity usually is short-lived and ends in oblivion.

The recent advances in medical science require more schooling and capacity from the medical man than ever before. But if we make medical education too expensive we will defeat our purpose in more ways than one. Every highly trained medical man is an asset to the commonwealth, and the commonwealth can afford to see to it that the right kind of man should not be excluded on account of expense. Ours is a poor man's profession, but there is an inherent element of caste in our profession inasmuch as the family has always cheerfully given its most gifted son to recruit our ranks; and should we turn our face toward caste and superiority?—"An Old Country Doctor," in the *Journal-Lancet*, August, 1926.

## CALIFORNIA MEDICAL ASSOCIATION

W. T. McARTHUR, M. D. .... President  
PERCY T. PHILLIPS, M. D. .... President-Elect  
ROBERT V. DAY. .... Vice-President  
EMMA W. POPE, M. D., San Francisco. .... Secretary and Associate Editor for California

### ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The first regular monthly meeting of the Association after the July vacation was held August 16, 1926.

Sumner Everingham presented an interesting patient with an esophageal diverticulum.

H. J. Templeton spoke on "Dermatologic Manifestations of Syphilis," and illustrated his remarks by lantern slides of the more common syphiloderms. He emphasized the point that all physicians should be familiar with such lesions, inasmuch as syphilis is apt to crop up in any field of medicine. He also stressed the necessity of careful examination of all genital lesions by means of the dark-field examination, for many lesions which appear to be rather benign, in reality harbor the spirocheta pallida.

The talk on experimental erysipelas by Harold Amoss was interesting and instructive. Doctor Amoss addressed the Association by invitation.

S. H. Buteau read a tribute to the late James Hamilton Todd. Adjournment was taken out of respect to Doctor Todd.

### MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—The regular monthly meeting was called to order at 8 p. m., August 26. The following members were present: O. W. Jones, W. F. Jones, F. Cannon, J. H. Kuser.

The minutes of the last meeting were read as approved. The secretary then read some notes made at the Health Officers' Meeting at Yosemite which were of interest to the medical profession. It was moved by Kuser that the Hon. Charles Reindollar, member of the Assembly from Marin County, be invited to address the medical society at their next meeting on September 23 on legislation affecting the medical profession. This motion was carried.

### ORANGE COUNTY

Orange County Medical Society (reported by D. R. Ball, secretary)—At the regular monthly meeting of the Orange County Medical Association, September 7, 1926, the following resolutions were passed:

Whereas, During the last year the California Medical Association has lost by death three of its oldest and most active members, namely, Drs. Thomas Clay Edwards of Salinas, James H. Parkinson of Sacramento, and Saxton Temple Pope of San Francisco; and

Whereas, These members were known in person or by reputation by all of us and had our greatest respect and love, therefore be it

Resolved, That the Orange County Medical Association in common with the California Medical Association feels most deeply the loss of these members and extends its heartfelt sympathy to their bereaved families; and further be it

Resolved, That copies of these resolutions be sent to the secretary of the California Medical Association and to the families of the deceased members.

### SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary)—In lieu of our August meeting, our society has been gathering from summer jaunts.

George W. Dufficy imbibed freely of the fog in the Monterey and Del Monte region, and is now back where he can show his pleasant smile in the sun.

A convention of ophthalmologists in Colorado took Wallace R. Briggs to that region.

Frank B. Reardan is still spending a portion of his two months' outing through the East. One feature of his

trip includes instruction in neuropsychiatry. A course will be taken in New York.

Those friends of Frederic Scatena who well remember his extended waistline will be surprised to hear that his weekly fling as a baseball pitcher and his daily dip in the local Elks' tank have about let him reach his life's ambition—to take off forty pounds.

Manuel Azevedo tells us that the rains of the Northwest are as severe as ever.

It is with real pleasure that we welcome William Miller to Sacramento again. Doctor Miller has remained in the North for some time regaining his health.

We now have more room in Sacramento for bachelor physicians, for we are losing James A. Warburton and C. E. von Geldern to the benedicts.



### SAN DIEGO COUNTY

**San Diego County Medical Society** (reported by Robert Pollock)—The fall activities of the medical society are looming up in the foreground after the summer recess. On the evening of August 27 the staff of Mercy Hospital was entertained by an excellent talk by C. P. L. Mathé, M. D., of San Francisco, who gave his impressions of urology as he saw it on a recent tour of the European clinics. He also outlined the up-to-date procedures in diagnosis and treatment of pathologic conditions in this domain, ending by a rapid-fire introduction to a large group of well-prepared radiographs of conditions of the kidney, ureters, and bladder. His paper was briefly discussed by Lee, Chamberlain, Foote, and Molitor.

On Tuesday, September 7, the staff of Scripps Memorial Hospital convened to discuss routine business and analyze some of the hospital records of the month that presented more than usual interest.

Ground has been broken at the corner of Third and A streets for a fourteen-story building devoted exclusively to doctors of medicine and dentistry and providing for a top floor auditorium to accommodate 250 seats. This will probably be ready for occupancy by June, 1927.

The County Supervisors are mapping out extensive improvements at the County Hospital. Two of the new buildings are nearing completion, a detailed account of which will appear in our next letter.

These are among the attractions ahead: for the regular October dinner the Society presents Dr. Frank Hinman of San Francisco, while in November the Scripps Metabolic Clinic presents Dr. Elliott P. Joslin of Boston.



### SAN JOAQUIN COUNTY

**San Joaquin County Medical Society** (reported by Fred J. Conzelmann, secretary)—The stated meeting of the San Joaquin County Medical Society was held Thursday, September 2, 1926, at 8 p. m. at headquarters of the local Health Center, 129 South American Street.

The meeting was called to order by the secretary. In the absence of the president and vice-president, J. V. Craviotto was chosen temporary chairman. Thirty-three members were in attendance. Those present were S. R. Arthur, E. L. Blackmun, J. F. Blinn, H. J. Bolinger, C. A. Broaddus, F. J. Conzelmann, J. V. Craviotto, J. T. Davison, J. F. Doughty, C. F. English, William Friedberger, Minerva Goodman, E. C. Griner, R. R. Hammond, C. D. Holliger, G. H. LaBerge, Grace McCoskey, R. T. McGurk, W. T. McNeil, F. G. Maggs, F. S. Marnell, J. E. Nelson, F. J. O'Donnell, Dewey R. Powell, D. F. Ray, G. H. Rohrbacher, G. H. Sanderson, J. J. Sippy, J. A. Smither, Margaret H. Synth, C. V. Thompson, A. L. Van Meter, G. J. Vischi.

Drs. A. J. Chesley, State Health Officer of Minnesota, and Charles H. Halliday of the division of epidemiology of the California State Health Department as guests of the Society; also Doctors Sheldon, Biethan, and Sinai as visitors.

The minutes of the previous meeting, May meeting, and of the special meeting of June 14, 1926 were read and approved.

The applications of Winifred Biethan and H. L. Gregory were read and referred to the committee on admission.

A communication from the secretary of the American Medical Association relative to the report of the Com-

mittee on Medical Relief in Disaster was read, and also the report of the committee.

Doctors Halliday and Chesley gave interesting discussions relative to the necessity of the profession being organized under a directing head to take charge of situations in case of disaster. All the members present voiced their approval of the plan.

Doctor Van Meter moved, seconded by Dr. Dewey Powell, that the Chair be authorized to appoint a committee of five to study the report of the A. M. A. committee with the view to get the organization to function immediately as outlined in the report. The motion carried. The Chair named Drs. Dewey R. Powell, Rohrbacher, Van Meter, Griner, and Maggs to constitute this committee.

The request of Mrs. W. B. Sampson, chairman of the Disaster Relief Committee of the local Red Cross Chapter, that the Medical Relief Committee of this society act as Advisory Committee for the Red Cross Chapter was granted.

The Chair appointed a committee consisting of Doctors Chapman, McGurk, and Powell to draw up suitable resolutions in behalf of the Society to be sent to Doctor Lynch as an expression of our sympathy in his great sorrow in the passing of his wife.



### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Alex C. Soper, Jr., secretary)—The regular September meeting of the Society was held at the Cottage Hospital Monday evening, September 13. Present, twenty-three members and four guests. President Henderson took the chair. The minutes of the preceding meeting were read, approved and ordered filed.

John B. Manning read a paper on "Anterior Poliomyelitis," which was discussed by Lamb, Schurmeier, Van Paing, and Koefod. Hugh Freidell reported an interesting case of Hodgkin's disease in which the pathology was confined to the abdominal region, the diagnosis appearing at autopsy. This was discussed by Koefod and Pierce. William H. Eaton presented a scheme for co-ordination of health agencies for the city, modeled on the very successful one used at Berkeley. This was discussed by Doctors Means, Bakewell, and Markthaler, and it seemed of such importance that the president appointed a committee to investigate and report its possibilities, consisting of Rexwald Brown (chairman), Eaton, Means, Manning, and Freidell; this was by authority of a motion duly seconded and passed.

Notice was taken of the death on September 5 of our eldest member, William H. Flint, and a committee appointed to draw up resolutions to be sent to his daughter.

Mr. George Coleman, bacteriologist, and head of the local chapter of the Association for Medical Progress, sent in a notice of the beginning of a campaign to put before the laity the facts of diphtheria prevention by newspaper publicity and a contest for prize essays on the subject by laymen.



### SISKIYOU COUNTY

**Siskiyou County Medical Society** (reported by S. S. Kalman)—Siskiyou County Medical Society met in Etna, September 5. Among those present were Doctors Haines, Heaney, Kalman, and Pius. In the absence of Doctor Dickenson, who was scheduled to read a paper, the members spent the time by enjoying social intercourse. Following the meeting, the doctors were adjourned for dinner as the guests of Doctor Haines, joined by Mrs. Haines and Mrs. Pius.

The next meeting will take place in Yreka on the first Sunday in November.

### CHANGES IN MEMBERSHIP

**New Members**—Fred W. Hodgins, Jessie B. Farrior, Henry E. Stafford, Oakland; Edward Liston, Eugene H. Reid, Lucile Elliott, Berkeley; Ford P. Cady, Willis Dutcher, Samuel J. Glass, John E. Kirkpatrick, Arthur M. Leavitt, Rudolph E. Monaco, F. T. Nayaka, T. H. Niemann, Catherine Ohnemuller, R. W. Stellar, Louis A. Eshman, Nikander M. Riabuchin (Orange County member), Los Angeles; William C. Cunningham, Leo John



Madsen, Santa Monica; Kathryn G. Wells, Montebello; George A. Bendlage, Long Beach; William W. Belford, George M. Selby, Ernest B. Porter, San Diego; Dohrmann K. Pischel, Julian Cohn, D. H. Craig, C. Frederic Fluhmann, San Francisco; John E. Miller, San Luis Obispo; W. H. Zieber, Menlo Park; Thornton M. Shorkley, Santa Barbara; Ward Cooper, Palo Alto; Donald E. Davenport, H. William Milo, Mountain View; Charles P. Durney, Harry J. Hoag, Rieta Hough, K. F. Pelkan, San Jose; Gustav A. Mauser, Los Gatos.

**Resigned**—William Day Moore, Los Angeles County; E. Blanche Ramer, San Diego County.

**Transferred**—H. J. Beaver, Santa Cruz County to Santa Clara County.

Arthur Fibush, Alameda County to San Francisco County.

George W. Garner, Los Angeles County to Kern County.

Robert A. Powers, San Mateo County to Santa Clara County.

**Deaths**—Angermann, Ewald Herman. Died at San Francisco, September 18, 1926, age 38. Graduate of the College of Physicians and Surgeons, San Francisco, 1917. Licensed in California in 1918. Doctor Angermann was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Flint, William H.** Died at Santa Barbara, September 5, 1926, age 74. Graduate of Bellevue Hospital Medical College, New York, 1877. Licensed in California in 1896. Doctor Flint was a member of the Santa Barbara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Winship, William Algernon.** Died at San Diego, September 3, 1926, age 66. Graduate of the Royal College of Physicians and Surgeons, London, England, 1885. Licensed in California in 1907. Doctor Winship was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

## EXTENSION LECTURE SERVICE

In the September issue of CALIFORNIA AND WESTERN MEDICINE members were invited to join the Extension Lecture Service and submit titles of papers they are prepared to present before county societies. The following completed program will be furnished all county secretaries as a reprint on November 1. Further names and titles will be included if sent this office prior to October 20:

**Harry E. Alderson, M. D.**, 320 Medico-Dental Building, 490 Post Street, San Francisco.

1. A Skin and Syphilis Clinic will be Held of Locally Selected Cases (five or six).
2. Newer Methods of Therapy in Dermatology.
3. Therapy of Syphilis.
4. Skin Disturbances from Foods and Drugs. (Lantern Slides.)

**Hans Barkan, M. D.**, 921 Medico-Dental Building, 490 Post Street, San Francisco.

1. Headaches Due to Ocular Causes.
2. Industrial Aspects of Eye Injuries.
3. Modern Methods of Cataract Operations.

**Edwin I. Bartlett, M. D.**, 1020 Medico-Dental Building, 490 Post Street, San Francisco.

1. The Use of the Exploratory Incision in the Diagnosis of Malignant Disease.
2. When and How to Operate on the Breast.
3. Simplified Classification of Breast Conditions, and "Short-Cuts" to Diagnosis.
4. Essential Points in Neck Dissections and Methods of Accomplishment.

**Leo P. Bell, M. D.**, Woodland Clinic, Woodland.

1. Diseases of the Spleen and Their Treatment.
2. Preoperative Preparation and Surgical Treatment of Exophthalmic and Thyrotoxic Goiter.
3. Diagnosis and Surgical Treatment of Carcinoma of Rectum and Sigmoid.
4. Preoperative Preparation and Surgical Treatment of Carcinoma of the Pancreas with Obstructive Jaundice.
5. Carcinoma of the Large Bowel, Its Surgical Treatment.
6. Imperforate Anus, Its Surgical Treatment.
7. Congenital Goiter.
8. The Surgical and Medical Significance of Dyspepsia.

**W. W. Boardman, M. D.**, 612 Union Square Building, 350 Post Street, San Francisco.

1. Treatment of Cholecystitis.

2. Cholecystography—Its Value as a Diagnostic Procedure in Infectious Gall Bladder Disease.
3. Some of the Newer Methods of Studying Liver and Gall Bladder Disease—Vandenberg's Test—Icterus Index—Phenoltetrachlorophthalein.
4. Present Conceptions of Jaundice.

**Zera E. Bofin, M. D.**, St Luke's Hospital, San Francisco.

1. The Uses of Blood Chemistry in Diagnosis. (Lantern Slides.)
2. The General Practitioner and the Carrier Problem.
3. Gaucher's Disease and Splenic Anemia.
4. The Pathology of Addison's Disease. (Lantern Slides.)
5. The Need for Medico-Legal Instruction.
6. The Antiquity of Disease. (Lantern Slides.)
7. Necropsies and Their Clinical Value.
8. The Teaching of Medical History in Medical Colleges.
9. The History of Military Medicine.
10. Hereditary Metabolic Disease.
11. Medicine and Colloid Chemistry. (Lantern Slides.)

**Philip King Brown, M. D.**, 401 Medical Building, 909 Hyde Street, San Francisco.

1. The Medical and Surgical Treatment of Peptic Ulcer.
2. The Medical and Surgical Treatment of Angina. (With Walter B. Coffey, M. D., San Francisco.)
3. Leukemia and Its Treatment, with Special Reference to X-Ray.
4. Pneumothorax, Phrenocotomy and Thoracoplasty in the Treatment of Pulmonary Tuberculosis. (With Leo Eloesser, M. D., San Francisco.)
5. Chronic Gall Bladders.
6. Management of Acute and Chronic Heart Disease.
7. Heart Irregularities and Their Treatment.
8. Measurements of Kidney Function and Prognosis and Treatment of Nephritis.

**Joseph Catton, M. D.**, 609 Howard Building, 209 Post Street, San Francisco.

1. The Doctor Looks at Crime.
2. Mental Problems in Every-Day Practice.
3. Some Practical Considerations of the Vegetated Nervous System.
4. What the General Practitioner Should Know of Encephalitis.

**E. W. Cleary, M. D.**, 803 Liebes Building, 177 Post Street, San Francisco.

1. Fractures of the Spine. (Lantern Slides.)
2. Fractures of the Long Bones. (Lantern Slides.)

**J. Paul de River, M. D.**, 861 Sutter Street, San Francisco.

1. Correction of External Nasal Deformities. (Lantern Slides.)
2. Correction of Deformities of Nose and About the Orbit. (Lantern Slides.)
3. The Present-Day Advance in Plastic Surgery. (Lantern Slides.)
4. Featural Plastics by the Tubed Pedicle Flap Method. (Lantern Slides.)

**Ernest S. du Bray, M. D.**, 1251 Flood Building, 870 Market Street, San Francisco.

1. Some Important Phases of the Diabetic Problem, with Special Reference to Early Diagnosis and the Differentiation of Certain Nonpancreatic Glycosurias.
2. The Management of Diabetes Mellitus, with Special Reference to the Planning of the Quantitative Diet and the Adjustment of Insulin Dosage.
3. Obesity and the Dangers of Weight Reduction Without Proper Medical Supervision.
4. A Review of Our Knowledge of the So-called Lipoid Nephrosis and Its Significance as a Clinical Entity.
5. Comments on the Degenerative Diseases, Their Prevalence, Significance, and Modes of Prevention.

**L. A. Emge, M. D.**, 507 Union Square Building, 350 Post Street, San Francisco.

1. Sterility.
2. The Transsufflation of Uterine Tubes.
3. What Can the Clinician Learn from Cancer Research?
4. The Lacerated Cervix.
5. The Menopause.
6. Varicose Veins of the Female Pelvis.

**Ernest H. Falconer, M. D.**, 316 Fitzhugh Building, 384 Post Street, San Francisco.

1. The Diagnosis of Pernicious Anemia. (Lantern Slides.)
2. The Treatment of Severe Anemias. (Lantern Slides.)
3. The Classification and Diagnosis of the Hemorrhagic Diseases. (Lantern Slides.)
4. The Spleen and Its Relationship to Diseases of the Blood-Forming Organs. (Lantern Slides.)

**Fred R. Fairchild, M. D.**, Woodland Clinic, Woodland.

1. Why Group Practice.
2. Practical Talk on Fractures. (Lantern Slides.)
3. Differential Diagnosis of Upper Abdominal Conditions.

**Ernst Gehrels, M. D.**, 308 Medical Building, 909 Hyde Street, San Francisco.

1. Local Anesthesia for Abdominal Operations, Especially Splanchnic Anesthesia.
2. The Radical Surgical Treatment of Gastric and Duodenal Ulcer.
3. The Treatment of Gall Stones in the Common Duct.
4. Operative Mobilization of Ankylosed Joints, Especially the Knee Joint.

**Arthur C. Gibson, M. D.**, 416 Physicians Building, 516 Sutter Street, San Francisco.

1. Pan-Sinusitis, with Suggestions for Rational Therapy. (Lantern Slides.)
2. Chronic Catarrhal Otitis Media, with Discussion of

- Causes, Treatment and Results. (Lantern Slides.)
3. Causes of Chronic Otitis Media, with Discussion of Treatment and Results. (Lantern Slides.)
  4. The Mastoid—Its Complication, Diagnosis, Treatment, with Results. (Lantern Slides.)
  5. Combined Intranasal and External Tear Sac Operations with Results (Totimosher Method). (Lantern Slides.)
- Thomas E. Gibson, M. D.**, 742 Flood Building, 870 Market Street, San Francisco.
1. The Diagnosis of Adrenal Tumors. (Lantern Slides.)
  2. Diagnosis and Treatment of Rupture of the Urethra. (Lantern Slides.)
  3. The Etiology of Hydronephrosis. (Lantern Slides.)
  4. Diagnosis and Treatment of Testicular Tumors. (Lantern Slides.)
- Edgar L. Gilcreest, M. D.**, 315 Fitzhugh Building, 384 Post Street, San Francisco.
1. Personal Reminiscences of Sir William Osler, Physician and Philanthropist. (Lantern Slides.)
  2. A Consideration of Rupture of Muscles and Tendons. (Lantern Slides.)
  3. Fractures of the Elbow Joint and the Lower End of the Humerus. (Lantern Slides.)
  4. Fractures of the Ankle Joint and the Lower End of the Tibia. (Lantern Slides.)
  5. Fractures of the Wrist Joint and the Lower End of the Radius. (Lantern Slides.)
- A. Gottlieb, M. D.**, 605 Consolidated Realty Building, 607 South Hill Street, Los Angeles.
1. Talipes.
  2. Sun Treatment in Orthopedic Conditions.
  3. Osteochondritis. (Lantern Slides.)
  4. The Painful Foot. (Lantern Slides.)
  5. Physiotherapy in Poliomyelitis Deformities.
  6. General Classification of Skeletal Deformities.
- J. Edward Harbison, M. D.**, Woodland Clinic, Woodland.
1. Hay Fever in Sacramento Valley.
  2. Cinchona Derivatives in Treatment of Cardiac Irregularities.
  3. Treatment of Thromboangitis Obliterans.
  4. Diagnosis and Treatment of Anthrax.
- R. W. Harvey, M. D.**, 711 Fitzhugh Building, 384 Post Street, San Francisco.
1. The Personality of the Patient.
  2. The Vegetative Nervous System.
  3. Vocational Education in the Rehabilitation of Nervous Cases.
  4. Epidemic Encephalitis.
  5. Combined System Disease.
  6. Treatment of Neurosyphilis.
  7. Psychasthenia and Its Treatment.
- Samuel H. Hurwitz, M. D.**, 1214 Medico-Dental Building, 490 Post Street, San Francisco.
1. The Present Outlook of the Treatment of Asthma and Hay Fever Patients.
  2. Present-Day Views of Essential Hypertension and Its Treatment.
  3. The Value of Bacillus-Acidophilus Therapy in Chronic Constipation.
  4. Light and Health.
- W. H. Kellogg, M. D.**, State Hygienic Laboratory, Berkeley.
1. The Problem of Diphtheria.
  2. Present Status of the Schick Test and Immunization Against Diphtheria.
  3. The Practicing Physician and Preventive Medicine.
  4. The Old and the New Public Health.
  5. Immunologic Reactions of Especial Interest to the Practicing Physician.
  6. The Status of Laboratories in the Practice of Medicine.
- William J. Kerr, M. D.**, University of California Hospital, San Francisco.
1. Treatment of Heart Disease.
  2. Diagnosis and Medical Treatment of Goiter.
  3. The Cardiac Irregularities, Their Recognition, Treatment, and Prognosis. (Lantern Slides.)
  4. Liver Function Tests. (Lantern Slides.)
- (Dr. Kerr would be glad to present any phase of the subject of heart disease and its treatment or would be glad to discuss the subject of pneumonia and empyema from the diagnostic and therapeutic standpoint.)
- Alson R. Kilgore, M. D.**, 724 Medico-Dental Building, 490 Post Street, San Francisco.
1. Treatment of Mouth and Skin Cancer by Surgery or Radium.
  2. The Precancerous Conditions of the Breast.
  3. Clinical and X-Ray Diagnosis of Bone Tumors.
  4. The Diagnosis of Early Breast Lumps by Gross Pathology at the Operating Table.
- Eugene S. Kilgore, M. D.**, 724 Medico-Dental Building, 490 Post Street, San Francisco.
1. Precordial Pain—Clinical Types and Significance.
  2. The Assessment of Circulatory Efficiency.
  3. Cardiac Irregularities—Their Noninstrumental Recognition and Significance.
- Henry A. R. Kreutzmann, M. D.**, 1195 Bush Street, San Francisco.
1. Sources of Error in the Diagnosis of Urinary Calculi.
  2. Causes and Treatment of Residual Bladder Urine.
  3. Urinary Tract Lesions Simulating Abdominal Diseases.
- Fred H. Kruse, M. D.**, 916 Fitzhugh Building, 384 Post Street, San Francisco.
1. The Irritable Colon. (Lantern Slides.)
  2. The Redundant Colon. (Lantern Slides.)
3. Peptic Ulcer, Etiology and Diagnosis. (Lantern Slides.)
  4. The Medical Treatment of Peptic Ulcer.
  5. Clinical Studies in Thyroid Disease.
  6. Intestinal Toxemias.
  7. Functional Dyspepsia.
- Robert William Langley, M. D.**, 802 Professional Building, 1052 West Sixth Street, Los Angeles.
1. Heart Disease and Its Relation to Obstetrics.
  2. Fluoroscopic Study of the Heart. (Lantern Slides.)
  3. Modern Medicine and the Public Attitude.
  4. Chronic Heart Disease and Its Management.
  5. Angina Pectoris.
  6. The Management of Heart Disease in School Children.
- E. Eric Larson, M. D.**, Woodland Clinic, Woodland.
1. Treatment of Peptic Ulcer.
  2. Treatment of Empyema.
  3. Repair of Postoperative Herniae.
  4. Treatment of Prostatic Disease.
  5. Diagnosis of Goiter.
- John D. Lawson, M. D.**, Woodland Clinic, Woodland.
1. Treatment of Acute Pyogenic Skin Infection by Roentgen Ray.
  2. Cholecystography. (Lantern Slides.)
  3. Use of Lipiodol in Demonstrating Fistulous Tracts. (Lantern Slides.)
  4. Pyelography as a Differential Diagnostic Measure. (Lantern Slides.)
  5. Diagnosis of Duodenal Ulcer. (Lantern Slides.)
- Hans Lissner, M. D.**, 204 Fitzhugh Building, 384 Post Street, San Francisco.
1. The Influence of the Pituitary, Thyroid and Adrenal Glands on Ovarian Function. (Lantern Slides.)
  2. Clinical Experiences with Collip's Parathyroid Extract. (Lantern Slides.)
  3. Hypophyseal Syndromes; Diagnosis and Treatment. (Lantern Slides.)
  4. Roentgenology as an Aid in the Diagnosis of Ductless Gland Disease. (Lantern Slides.)
  5. The Differential Diagnosis and Treatment of Goiter. (Lantern Slides.)
- George Warren Pierce, M. D.**, 720 Medico-Dental Building, 490 Post Street, San Francisco.
1. Plastic Surgery in Civil Practice. (Lantern Slides.)
  2. Care of the Injured Hand. (Lantern Slides.)
  3. The Use of the Tubed Pedicle Flap in Plastic Surgery. (Lantern Slides and Moving Pictures.)
  4. Plastic Reconstruction of the Hand. (Lantern Slides.)
  5. Plastic Surgery of the Nose. (Lantern Slides.)
  6. Reconstruction of the Eye-Socket. (Lantern Slides and Moving Pictures.)
  7. The Treatment of Burns. (Lantern Slides.)
- Philip H. Pierson, M. D.**, 811 Medico-Dental Building, 490 Post Street, San Francisco.
1. Diagnosis and Treatment of Bronchiectasis.
  2. Bronchial Asthma—Diagnostic Methods and Treatment.
  3. Is Tuberculosis Dangerous to Pregnancy?
  4. Can We Diagnose Tuberculosis Entirely from the X-Ray. What Conditions Stimulate it? (Lantern Slides.)
  5. Pleural Effusion, With or Without Pus. What Does It Mean from a Tuberculosis Viewpoint?
  6. Hemoptysis—Its Importance and Treatment.
  7. Pneumothorax—Its Indications and Contraindications—Cause of Failures—Results.
  8. What Forms of Therapy for Tuberculosis have Stood the Test and What are Their Indications?
- V. H. Podstata, M. D.**, The Livermore Sanitarium, Livermore.
1. The Unusual (Problem) Child.
  2. The Varieties of Incipient Mental Depression. (Doctor Podstata not available on Tuesdays.)
- D. Schuyler Pulford, M. D.**, Woodland Clinic, Woodland.
1. Insulin Therapy.
  2. Application of the Clinical Laboratory to the Practice of Medicine.
  3. Grading of Neoplasms.
  4. Dietary Treatment of Epilepsy.
- J. Marion Read, M. D.**, 1183 Flood Building, 870 Market Street, San Francisco.
1. Classification and Treatment of Thyroid Disease. (Lantern Slides.)
  2. The Relation of Iodin to Thyroid Disease. (Lantern Slides.)
  3. The Prognosis and Treatment of Graves' Disease. (Lantern Slides.)
- Francis H. Redewill, M. D.**, 1117 Flood Building, 870 Market Street, San Francisco.
1. Impotence—Latest Methods of Treatment with Diathermy, Quartz Light and Gland Transplant. (Lantern Slides.)
  2. Tumors of Prostate and Bladder. (Lantern Slides.)
  3. Hydronephrosis—Latest Findings in Respect to the Part Played by Pyleovenous Back Flow. (Lantern Slides.)
  4. Diathermy in Urology, Practical Demonstration with Machines.
  5. Perineal Prostatectomy, Latest Technique, Fore and Postoperative Care.
  6. Mercurochrome, Its Use with Foreign Protein and Sugar.
  7. Testicular Tumors and Deep X-Ray Therapy. (Lantern Slides.)
  8. Treatment of Acute Gonorrhea. (Lantern Slides.)
- Alfred C. Reed, M. D.**, 715 Fitzhugh Building, 384 Post Street, San Francisco.



1. Intestinal Protozoa in Clinical Practice.
  2. Similarities of Sprue and Pernicious Anemia.
  3. Treatment of Dysentery.
  4. Management of Asthma.
  5. Avoiding Old Age and the Preservation of Youth.
  6. Tropical Disease in California.
- Robert Lewis Richards, M. D.**, 409 Fitzhugh Building, 384 Post Street, San Francisco.
1. The Connecting Link Between Mental and Physical Medical Facts.
  2. Psychoses Look at the Doctor.
  3. Psychiatric Endocrinology.
  4. Bad Parents and Fearful Children. Why?
- Emmet Rixford, M. D.**, 1795 California Street, San Francisco.
1. Mechanics of Production of Fractures. (Lantern Slides.)
  2. General Principles of Treatment of Fractures.
  3. Ulcer of the Stomach and Duodenum.
  4. Cancer of the Stomach.
  5. Cancer of the Colon and Rectum.
  6. Coccidioidal Granuloma—The San Joaquin Valley Disease.
  7. Goiter and Other Diseases of the Thyroid Gland.
  8. Surgery of the Lymphatic System.
  9. Surgery of the Gall Bladder and Bile Ducts.
  10. Hernia.
- Hobart Rogers, M. D.**, 242 Moss Avenue, Oakland.
1. Practical Aspects of Cardiology.
- Max Rothschild, M. D.**, 704 Fitzhugh Building, 384 Post Street, San Francisco.
1. The Early Diagnosis of Pulmonary Tuberculosis.
  2. The Diagnosis and Treatment of Tuberculosis of Bronchial Glands in Children. (Lantern Slides.)
  3. The Problem of Immunity in Tuberculosis.
  4. The Treatment of Tuberculosis with Specific Remedies. (Lantern Slides.)
  5. The Treatment of Tuberculosis with Nonspecific Remedies, with Special Reference to Pneumothorax Treatment. (Lantern Slides.)
  6. Tuberculosis and Pregnancy.
  7. Tuberculosis and Syphilis. (Lantern Slides.)
  8. Fever in Tuberculosis—Its Significance in Regard to Diagnosis, Treatment, and Prognosis.
  9. Heliotherapy and Tuberculosis. (Lantern Slides.)
  10. Lung Abscess—Etiology, Diagnosis, and Treatment. (Lantern Slides.)
- Albert H. Rowe, M. D.**, 242 Moss Avenue, Oakland.
1. Diagnosis and Treatment of Seasonal and All-Year-Round Type of Hay Fever and Bronchial Asthma. (Lantern Slides.)
  2. The Role of Allergy in the Production of Respiratory, Gastro-Intestinal, Cutaneous, and Other Disease Syndromes. (Lantern Slides.)
  3. Comment on the Methods and Results of the Insulin Treatment of Diabetes. (Lantern Slides.)
- C. O. Sappington, M. D.**, 1706 Broadway, Oakland.
1. Industrial Hygiene as a Medical Specialty. (Lantern Slides.)
  2. Periodic Health Examinations—The Need, Technique and Results. (Lantern Slides.)
  3. Industrial Lead Poisoning.
  4. Industrial Absenteeism—An Application of Statistics to Medical Practice. (Lantern Slides.)
  5. The Co-ordination of Health Work in Schools and Industries.
  6. The Economic Loss Due to Sickness in Industry. (Lantern Slides.)
  7. Problems in Industrial Ventilation and Illumination. (Lantern Slides.)
  8. The Administration of Part-Time Medical Services in Smaller Industries.
  9. Standards for Industrial Physical Examinations.
- John Hunt Shephard, M. D.**, Twohy Building, San Jose.
1. Squamous Cell Epithelioma of the Lip—Especially Reconsideration of Grading the Degree of Malignancy. (Lantern Slides.)
  2. Our Present Knowledge of Thyroid Perversion.
- Harry Spiro, M. D.**, 501 Flood Building, 870 Market Street, San Francisco.
1. Angina Pectoris.
  2. Some Related Cardiac Irregularities.
  3. Quinidine Therapy—A Safe Indication.
  4. Aortitis. (Lantern Slides.)
  5. Blood Pressure and Its Treatment.
  6. Judging the Quality of the Heart Muscle by Fluoroscopic.
  7. X-Ray Examination of Heart and Aorta. (Lantern Slides.)
  8. Aortic Stenosis.
- William E. Stevens, M. D.**, 602 Flood Building, 870 Market Street, San Francisco.
1. Urology in Women.
  2. Diagnosis and Treatment of Pathologic Conditions of the Urinary Tract During Infancy and Childhood.
  3. Urinary Calculi.
- Steele F. Stewart, M. D.**, 817 Westlake Professional Building, 2007 Wilshire Boulevard, Los Angeles.
1. The Convalescent Care of Infantile Paralysis.
  2. The Treatment of Recurrent Dislocations.
  3. The Treatment of Spastic Paralysis.
- Laurence R. Taussig, M. D.**, 803 Fitzhugh Building, 384 Post Street, San Francisco.
1. Malignancies of the Skin, Their Diagnosis and Treatment. (Lantern Slides.)
- H. J. Templeton, M. D.**, 3115 Webster Street, Oakland.
1. Dermatologic Manifestations of Syphilis. (Lantern Slides.)
  2. Modern Considerations of Syphilis.
  3. Common Dermatoses. (Lantern Slides.)
- E. B. Towne, M. D.**, Union Square Building, 350 Post Street, San Francisco.
1. Diagnosis and Treatment of Tumors of the Brain. (Lantern Slides.)
  2. Diagnosis and Treatment of Pituitary Tumors. (Lantern Slides.)
  3. Diagnosis and Treatment of Tumors of the Spinal Cord. (Lantern Slides.)
  4. Diagnosis and Treatment of Trigeminal Neuralgia.
  5. Treatment of Injuries of the Brain and Spinal Cord.
  6. The Roentgen Ray in Neurosurgical Diagnosis and Treatment. (Lantern Slides.)
- William Voorsanger, M. D.**, 1001 Medico-Dental Building, 490 Post Street, San Francisco.
1. Pulmonary Conditions Wrongly Diagnosed as Tuberculosis. (Lantern Slides.)
  2. Tuberculosis Laryngitis—Is It Curable? Heliotherapy as a Remedy.
  3. Gastrointestinal Complications in Pulmonary Tuberculosis.
  4. Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis.
  5. Undiagnosed Coughs.
  6. Advances in the Diagnosis of Pulmonary Tuberculosis.
  7. Suggestions on the Importance of the Sanitarium in the Treatment of Pulmonary Tuberculosis.
  8. Pulmonary Abscess; Classification; Prognosis and Treatment. (Lantern Slides.)
- James T. Watkins, M. D.**, 212 Medical Building, 909 Hyde Street, San Francisco.
1. Technical Improvements in the Treatment of Fractures.
  2. Surgical Approaches of the Knee, Hip, and Shoulder Joints.
  3. Congenital Hip and Club-Foot.
  4. Treatments of Infantile Paralysis.
- Miley B. Wesson, M. D.**, 1275 Flood Building, 870 Market Street, San Francisco.
1. Urethritis and Sequelae. (Lantern Slides.)
  2. Diseases of the Prostate: Their Treatment—Medical and Surgical. (Lantern Slides.)
  3. The Prostatic Median Bar—Complications and Treatment. (Lantern Slides.)
  4. Diseases of the Bladder—Symptoms and Treatment. (Lantern Slides.)
  5. Diseases of the Kidney and Ureter—Symptoms and Treatment. (Lantern Slides.)
  6. Cysts of the Prostate and Urethra. (Lantern Slides.)
  7. Rupture of the Kidney—Symptoms and Treatment. (Lantern Slides.)
  8. Tumors of the Testicle—Diagnosis and Treatment. (Lantern Slides.)
- Julian M. Wolfsohn, M. D.**, 1401 Medico-Dental Building, 490 Post Street, San Francisco.
1. Diagnosis and Treatment of Subacute Combined Degeneration of the Spinal Cord, and of Multiple Sclerosis. (Lantern Slides.)
  2. Mechanism and Treatment of Hysteria.
  3. Poliomyelitis and Lethargic Encephalitis—Their Diagnosis and Treatment. (Lantern Slides.)
  4. Demonstration of the Use of Lipiodol in Spinal Cord Tumors and Subarachnoid Block.
  5. Syphilis of the Central Nervous System. (a) Diagnosis. (b) Discussion and Demonstration of the Modern Treatments, Including the Malarial Treatment of General Paralysis.
  6. Demonstration of Puncture of the Cisterna Magna.
- John Homer Woolsey, M. D.**, 907 Medico-Dental Building, 490 Post Street, San Francisco.
1. Gastric and Duodenal Pathology. (Lantern Slides.)
  2. Empyema and Subphrenic Abscess. (Lantern Slides.)
  3. Carcinoma of the Rectum. (Lantern Slides.)
  4. Wound Infections.

## COUNCIL MINUTES APPROVED AT THE ONE HUNDRED AND SIXTY-THIRD MEETING OF THE COUNCIL

*Minutes of the One Hundred and Fifty-ninth Meeting of the Council of the California Medical Association—Held in Room 201, Hotel Oakland, Oakland, California, Tuesday, April 27, 1926, at 8 p. m.*

**Present**—Doctors Ewer, McArthur, Catton, Kinney, Kiger, Bingaman, Beattie, Smith, Peers, Kress, Shoemaker, Gibbons, Pope, and General Counsel Peart.

**Absent**—Doctors Parkinson, DeLappe, Coffey, McLeod, Bine, and Curtiss.

1. Illness of James H. Parkinson—The secretary read a letter from James H. Parkinson, Sacramento, submitting his resignation as councilor of the Eighth District, on account of illness. Drs. R. L. Rigdon, San Francisco, and George J. Hall, Sacramento, addressed the Council at Doctor Parkinson's request.

On motion of Kress, seconded by Catton it was Resolved, That the Council request that Doctor Parkin-

son withdraw his resignation as Councilor of the Eighth District; that the Council send him good wishes and express its great sorrow on learning of his illness; that a special committee be appointed to draft a letter to be sent to Doctor Parkinson; and that a committee on behalf of the Council visit him.

Doctor Ewer, presiding officer, appointed William T. McArthur a committee of one to draft the special letter to Doctor Parkinson expressing the sorrow of the Council, and Robert Peers a committee of one to visit Doctor Parkinson on behalf of the Council.

**2. Appointment of Temporary Chairman**—The president, Edward N. Ewer, announced that in the absence of Doctor Parkinson it would be necessary to appoint a temporary chairman.

On motion of Catton, seconded by Kiger, it was

Resolved, That Morton R. Gibbons, San Francisco, act as temporary chairman of the Council.

Doctor Gibbons then took the chair, and called the meeting to order.

**3. Minutes of the Hundred and Fifty-eighth Meeting of the Council**—The secretary read the minutes of the hundred and fifty-eighth meeting of the Council. On motion of McArthur, seconded by Beattie, it was

Resolved, That the minutes of the hundred and fifty-eighth meeting of the Council, as mailed to each member thereof, be approved.

**4. Minutes of the Eighty-ninth Meeting of the Executive Committee**—The secretary read the minutes of the eighty-ninth meeting of the Executive Committee, which were approved as read.

**5. Minutes of the Ninetieth Meeting of the Executive Committee**—The secretary read the minutes of the ninetieth meeting of the Executive Committee, which were approved as read.

**6. Report of the Chairman of the Council**—The report of the Council as prepared by James H. Parkinson, chairman, was read by the secretary, discussed section by section, and a few minor changes in phraseology made.

On motion of Ewer, seconded by McArthur, it was

Resolved, That the report of the Council be approved as amended.

**7. Clinical Prizes**—Dudley M. Fulton, chairman of the Committee on Clinical Prizes read the formal report of the committee, in which the committee recommended that no award be made for the contributions on research work, but the paper of Albert H. Rowe and Hobart Rogers, entitled "A Study of Carbohydrate Tolerance in Normals and Non-Diabetics," receive honorable mention; and the paper of Emil Bogen entitled "Arachnidism, A Study of Spider Poisoning" be awarded the prize for the best clinical essay, and that it be recommended for publication in the Archives of Internal Medicine.

On motion of Catton, seconded by Peers, it was

Resolved, That the paper entitled "Arachnidism, A Study of Spider Poisoning" by Emil Bogen be awarded the prize for the best essay on a clinical subject and that the paper be submitted for publication in the Archives of Internal Medicine and an abstract be published in CALIFORNIA AND WESTERN MEDICINE; that the prize for the best essay on research work be not awarded, but the paper entitled "A Study of Carbohydrate Tolerance in Normals and Non-Diabetics" by Albert H. Rowe and Hobart Rogers be awarded honorable mention.

On motion of Kress, seconded by Kinney, it was

Resolved, That the thanks of the Council be tendered the Clinical Prize Committee for the services rendered and that the committee be continued.

**8. Board of Trustees**—The advisability of the Association providing for a board of trustees to exercise a custodianship of Association funds and properties somewhat after the fashion of the Board of Trustees of the American Medical Association was discussed.

It was the sense of the Council that amendments to the Constitution and By-Laws should be submitted providing for such a board.

**9. Meeting with Members of the State Board of Medical Examiners**—The secretary advised that John C. Yates of the Legal Department of the State Board of Medical Examiners was anxious to discuss various legal

questions with members of the Council. The Chair appointed Doctors Kress and Bingaman to meet with Doctor Yates.

**10. Adjournment**—There being no further business, the Council adjourned to meet in the same place at 10 a. m. Wednesday, April 28.

*Minutes of the One Hundred and Sixtieth Meeting of the Council of the California Medical Association*—Held in Room 201, Hotel Oakland, Oakland, California, Wednesday, April 28, 1926, at 10 a. m.

**Present**—Doctors Ewer, McArthur, Kinney, Kiger, Bingaman, DeLappe, Smith, McLeod, Peers, Kress, Shoemaker, Gibbons, Pope, and General Counsel Peart.

**Absent**—Doctors Parkinson, Beattie, Coffey, Catton, and Curtiss.

**Invited**—Doctor Musgrave.

**1. Place of Meeting for 1927**—The secretary read letters inviting the Association to hold the 1927 annual meeting at Santa Cruz from Hotel Casa del Rey and the Santa Cruz Chamber of Commerce; letter from the San Francisco Tourists and Convention League inviting the Association to San Francisco; and letter from the Hotel Biltmore, Los Angeles.

Action by the Council—On motion of Kiger, seconded by Peers, it was

Resolved, That the annual meeting for 1927 be held at Los Angeles and the invitation of the Los Angeles Biltmore inviting the Association to make that hotel its headquarters be accepted; the exact date of meeting to be fixed later.

Discussion was had as to the date of the 1927 annual meeting, and it was stated that the latter part of April and approximately two weeks prior to the annual meeting of the American Medical Association was the most desirable time; the exact date to be set later.

**2. History of the California Medical Association**—Report of Emmet Rixford, chairman of the Committee on the Preservation of the History of the California Medical Association, was read by the secretary.

Action by the Council—On motion of Shoemaker, seconded by McArthur, it was

Resolved, That the report of the Committee on the Preservation of the History of the California Medical Association be accepted and that the committee be continued.

**3. California and Western Medicine**—Memorandum from the editor regarding the advisability of making CALIFORNIA AND WESTERN MEDICINE the accredited spokesman of various legitimate organizations throughout the state was read. William E. Musgrave, editor, advised that he was anxious to have a circulation of six thousand so that he could increase the advertising rate.

It was the sense of the Council that Doctor McArthur be appointed a committee of one to investigate the possibility of the Hawaiian Islands coming into the Association on the same basis as Utah and Nevada.

Action by the Council—On motion of Kress, seconded by Peers, it was

Resolved, That a special committee be appointed to make an investigation of the matter of enlarging the scope of CALIFORNIA AND WESTERN MEDICINE and report as to what is considered the best conclusion in the matter.

**4. Bibliographies**—The question of the inclusion of bibliographies in CALIFORNIA AND WESTERN MEDICINE was discussed. The editor spoke of the inaccuracies of bibliographies submitted by different writers.

Action by the Council—On motion of Shoemaker, seconded by McArthur, it was

Resolved, That the report of Doctor Musgrave be accepted and that the matter of the inclusion of bibliographies be left to the discretion of the editor.

**5. Size of Reprints**—The most desirable size of reprints from CALIFORNIA AND WESTERN MEDICINE was discussed. It was pointed out that the type for these reprints was set at the time the journal was printed, and the use of a 7 x 10-inch page would necessitate a ridiculously wide margin if one column were used or practically no margin if two columns were set to the page. Further that a column width other than that used in CALIFORNIA AND



WESTERN MEDICINE would put the C. M. A. to tremendous extra expense.

Action by the Council—On motion of Kress, seconded by Shoemaker, it was

Resolved, That the action of the Executive Committee on the size of reprints taken at the ninetyeth meeting thereof be rescinded; and that the reprint be along the lines of general usage at the discretion of the editor.

6. **Report of the Secretary**—Emma W. Pope of San Francisco read the secretary's report, in which was pointed out the present financial status of the Association and its activities during the year.

It was the sense of the Council that the report be accepted and that it be submitted at the first meeting of the House of Delegates.

7. **Prenatal Pamphlet**—The secretary advised that the present status of the Prenatal Pamphlet is that the Board of Health is willing to publish this pamphlet when they have the necessary fund and send the pamphlet out in conjunction with the letters which the Association desired to replace with this pamphlet. Letter from Doctor Bine was read in which he suggested that the Association print the pamphlet bearing the expense itself and sell to the members of the Association for 10 cents per copy. The question of the advisability of the Association, both from the standpoint of policy and money expense, entering this class of public health publicity and thus establishing a precedent was discussed.

Action by the Council—On motion of Kress, seconded by Kiger, it was

Resolved, That a special committee consisting of Doctor Peers and Doctor Pope look into the matter further and see whether anything can be done to map out a course of procedure agreeable to both the State Board of Health and the committee of this Association which compiled the prenatal literature.

8. **Technical Specialties**—Joseph Catton, chairman of the special committee appointed to investigate various questions relating to technical specialties, informed the Council that he had met with his committee, and although the committee felt that no definite action should be taken at this time, it believed that no organization other than properly qualified physicians and surgeons should hold membership or other official connection with the Association, but that the Association should let it be known that it stood ready to offer counsel or advice to such persons or organizations as may be rightly interested in public health questions.

The manner in which the Technical Specialties were affiliated with the C. M. A. at the Coronado meeting was also discussed.

Action by the Council—On motion of Kress, seconded by McArthur, it was

Resolved, That inasmuch as the specialties were affiliated some years ago that the matter be laid on the table for further study and consideration.

9. **Affiliate Members**—Approval of the Council was asked of the following applicants for affiliate membership: Brett Davis, Merced County; Robert Doig, San Diego, San Diego County; William L. Gatchell, Chico, Butte County; Ashbury Loper, Dinuba, Tulare County; William V. D. Nichols, Oceanside, San Diego County; Oscar Stansbury, Chico, Butte County.

Action by the Council—On motion of Shoemaker, seconded by Catton, it was

Resolved, That Brett Davis, Robert Doig, William LeF. Gatchell, Ashbury N. Loper, William Van D. Nichols, and Oscar Stansbury, be accepted as affiliate members of the California Medical Association.

10. **Adjournment**—There being no further business, the meeting adjourned to meet in the same place at 2 p. m., Thursday, April 29.

*One Hundred and Sixty-first Meeting of the Council of the California Medical Association*—Held in Room 201, Hotel Oakland, Oakland California, Thursday, April 29, 1926, at 2 p. m.

**Present**—Doctors Ewer, McArthur, Kinney, Kiger, Bingaman, DeLappe, Beattie, Smith, Catton, Peers, Kress, Shoemaker, Gibbons, Pope, and General Counsel Peart.

**Absent**—Doctors Parkinson, Coffey, McLeod, Bine, and Curtiss.

1. **Industrial Medical Practice**—The report of the Committee on Industrial Medical Practice was read by the secretary.

Action by the Council—On motion of Catton, seconded by DeLappe, it was

Resolved, That the report of the committee be accepted and that the committee be continued; that the committee be advised that the violation of these ethics as of any other ethics of the Association may very properly be brought before the county society as provided in the by-laws, and that the full co-operation of the Council may be expected when the matter is brought before that body.

The question of handling cases for the large commercial concerns who prefer to have all cases handled by a representative in the city where the main office is located was discussed. The general counsel advised the formation of a group of doctors to handle this class of practice with a good man for manager of the central office.

2. **National Endowment Fund**—The secretary presented correspondence from the National Endowment Fund of the Physicians' Home which had been referred to the Council by the editor, in which they requested publicity in CALIFORNIA AND WESTERN MEDICINE.

It was the sense of the Council that the secretary should write to some of the doctors listed and secure further information regarding the plan.

3. **Report of the Legal Department**—The General Counsel presented the report of the Legal Department and outlined briefly the conditions of claims and cases that had come before the department in the preceding year. It was the sense of the Council that the report be received and placed on file.

4. **List of Physicians and Hospitals for State Automobile Associations**—The General Counsel advised that the Northern California Automobile Association felt that the distribution of lists of physicians and hospitals would not be practicable on account of the varying opinions of the members of the Automobile Association. It was suggested that as no progress could be made, the matter be dropped.

5. **Unsolicited Merchandise**—The secretary presented a letter from the Retail Merchants' Association of San Francisco in which they requested approval of H. R. Bill 3991 prohibiting the sending of unsolicited merchandise through the mail. It was the sense of the Council that the letter be filed.

6. **Publication of Revised Constitution and By-Laws**—It was pointed out that the present edition of the Constitution and By-Laws had been amended to such an extent that it was practically useless and very confusing. It was the sense of the Council that the matter of publishing a revised edition be laid over until next year on account of the numerous amendments that would be acted upon at that time.

7. **Indemnity Defense Fund**—The Council was advised that it was necessary to elect a trustee of the Indemnity Defense Fund at this session as the term of Lemuel P. Adams, Oakland, expired.

Action by the Council—On motion of Smith, seconded by Peers, it was

Resolved, That Lemuel P. Adams be elected trustee of the Indemnity Defense Fund for the ensuing three years.

8. **Smallpox Situation**—Discussion was had as to the smallpox situation in California during the past few months, and the value of vaccination as a true preventive outlined. Also whether it was good policy for the C. M. A. to strive any longer for compulsory vaccination laws.

Action by the Council—On motion of Kress, seconded by DeLappe, it was

Resolved, That it be the opinion of the Council that this body is in hearty favor of vaccination and urges all of its members to insistently advocate vaccination to friends, patients, and the public.

9. **Committee on the Medical Practice Act**—Discussion was had as to the feasibility of submitting a revised Medical Practice Act to the people by the initiative. The

committee, consisting of George H. Kress, chairman, and Harlan Shoemaker, through George H. Kress submitted the following report for consideration by the Council:

1. As regards a model medical practice act to be brought into being through an initiative to be voted upon by the citizens of the state, it was felt that though a model medical practice act was in many ways desirable, there were nevertheless so many immediate practical obstacles, such as the expense of bringing such an initiative before the people, that it seemed not possible to bring such a proposed initiative before the people in time for consideration at the next general election.

In these viewpoints through conference with the members of the Law and Education Committee of the California State Board of Medical Examiners, we find that the State Medical Board also concurs.

2. No new medical practice act through initiative being possible at this time, the question arises as to how our present medical law may be desirably amended at the California legislature, which meets in January, 1927.

Such outstanding amendments to be specially considered are:

(a) A different method of appointment of members of the Board. At present the Governor has the sole power of appointment. The substitute plan now proposed is to revert to the original method provided in our 1903 Medical Practice Act, namely that the Governor make his State Medical Board appointments from three lists of nominees to be presented to him through the state medical societies, viz., The California Medical Association, the California Homeopathic Association, and the California Eclectic Medical Association. The Board to consist of ten members: seven of them regulars, two homeopaths, and one eclectic. Each of these societies to submit to the Governor twice the number of names possible of appointment from its group. In our California Medical Association that would mean fourteen nominees to go to the Governor. These nominees to be elected by the Council of the California Medical Association.

(b) A proposed amendment permitting medical undergraduates of accepted schools to take examinations on the fundamental medical studies at the satisfactory completion of their second year in a medical school of accepted standard.

Your committee presents the above as desirable amendments, and in conference with a special committee of the California State Board of Medical Examiners that committee also tentatively concurred in the advisability of such changes.

3. The committee also requests authority to appoint an advisory subcommittee of educators and others to aid in its work. The names of Drs. Ray Lyman Wilbur, Percy T. Magan, and Dean L. S. Schmitt are suggested as possible members of the committee.

4. Your committee submits the above and requests permission to have the General Counsel of our society co-operate in drawing up the proposed initiative bill and amendments so that they may be submitted to the Council, to determine in what form, etc., any amendments are to be presented to the legislature in case such action should be decided upon.

Action by the Council—On motion of McArthur, seconded by Kinney, it was

Resolved, That the report of the Special Committee on the Medical Practice Act be accepted.

10. **Arrangements Committee**—Drs. William Duffield, Harlan Shoemaker, George Kress, William H. Kiger, Wayland Morrison, and Albert Soiland were appointed members of the Arrangements Committee for the 1927 annual meeting at Los Angeles; William Duffield to act as chairman.

11. **Sheppard-Towner Act**—Edward N. Ewer, chairman of the committee appointed to investigate the Sheppard-Towner Act legislation, advised that sufficient time had not elapsed since the appointment of his committee to make an investigation and prepare a report for the Council.

12. **Technical Specialties**—Discussion was had as to the dangers which might result from dropping the Technical Specialties Section from the Association without thorough investigation and consideration of the problem.

Action by the Council—On motion of Kress, seconded by Ewer, it was

Resolved, That a committee of fifteen—five from the North, five from the South, and five at large—with a central chairman, be appointed to make a survey of the whole subject and bring in a report to the Council.

13. **Resignation of Doctor Bine**—Morton R. Gibbons, acting chairman of the Council, informed the Council that Doctor Bine had sent his formal resignation as councilor-at-large to the Association. Doctor Bine's letter was then read. It was the sense of the Council that the letter be filed.

14. **Adjournment**—There being no further business, the Council adjourned to meet in the same place on Saturday, at 10 a. m., unless a special meeting be called sooner by the chairman.

*One Hundred and Sixty-Second Meeting of the Council of the California Medical Association*—Held in Room 201, Hotel Oakland, Oakland, California, Saturday, May 1, at 10 a. m.

**Present**—Doctors McArthur, Phillips, Kinney, Kiger, Bingaman, DeLappe, Shephard, Coffey, Hamlin, Rogers, Kress, Shoemaker, Catton, Gibbons, Pope, and General Counsel Peart.

**Absent**—Doctors Parkinson and Curtiss.

1. **Absence of Doctor Hamlin**—Morton R. Gibbons, temporary chairman of the Council, advised that word had been received from Dr. O. D. Hamlin that he was unavoidably delayed, but would arrive shortly after the Council convened.

2. **Adjournment of 1925 Council**—On motion duly made and seconded, it was

Resolved, That the 1925 Council adjourn; that the 1926 Council convene; and that the secretary call the roll.

**Present**—Doctors Phillips, McArthur, Kinney, Kiger, Bingaman, DeLappe, Shephard, Coffey, Kress, Shoemaker, Catton, Gibbons, Pope, and General Counsel Peart. Doctor Hamlin arrived at 10:20.

**Absent**—Doctors Parkinson, Rogers, and Curtiss.

3. **Election of Chairman**—On motion of Kress, seconded by Peers, it was unanimously

Resolved, That O. D. Hamlin, Oakland, be elected chairman of the Council for the ensuing year.

4. **Appointment of Editor**—On motion of McArthur, seconded by Peers, it was unanimously

Resolved, That William E. Musgrave of San Francisco be reappointed to succeed himself as editor of CALIFORNIA AND WESTERN MEDICINE for the ensuing year.

5. **Appointment of Secretary**—On motion of Kress, seconded by Shoemaker, it was

Resolved, That Dr. Emma W. Pope of San Francisco be appointed to succeed herself as secretary of the Association for the ensuing year.

6. **Appointment of General Counsel**—On motion of McArthur, seconded by Peers, it was

Resolved, That Hartley F. Peart of San Francisco be reappointed to succeed himself as counsel for the Association for the ensuing year.

7. **Appointment of Assistant General Counsel**—On motion of Kiger, seconded by McArthur, it was

Resolved, That Hubert T. Morrow of Los Angeles be reappointed to succeed himself as assistant general attorney for the ensuing year.

8. **O. D. Hamlin**—Dr. O. D. Hamlin arrived at this point and Morton R. Gibbons, temporary chairman, informed Doctor Hamlin of his election as chairman of the Council. Doctor Hamlin then took the chair.

9. **Motion of Appreciation**—On motion of Kress, seconded by Peers, it was

Resolved, That the thanks of the Council be extended Morton Gibbons for the able manner in which he conducted the sessions of this meeting.

10. **Western Urological Society**—The secretary advised that section officers complained that the meeting of the Western Urological Society had interfered with the attendance of the meeting of the Urological Section and that some action should be taken so that such meetings



would not conflict with meetings of the various sections.

Action by the Council—On motion of Kress, seconded by Kiger, it was

Resolved, That this Council inform the Program Committee that in the opinion of the Council it is most inadvisable to print the program of any other organization of medicine in our official program of the California Medical Association where there is danger of conflict in meetings.

In making up the program of future meetings, the Council instructed the secretary to call such organizations as are included in the Technical Specialties Section "Affiliate Group Meetings" and list same on a special page.

Further action by the Council—On motion of Catton, seconded by McArthur, it was

Resolved, That the action of this Council in relation to the inclusion of such organizations as are included under the Technical Specialties Section be referred to the committee of fifteen appointed to investigate this whole subject for further consideration.

**11. Better Health**—Dr. Walter B. Coffey, councilor, referred to the ownership by the Association of 200 shares of the capital stock of Better Health Incorporated, and stated that there had been some inquiry by members present at the meeting as to the present status of the affairs of that corporation. Doctor Coffey informed the Council, as chairman of the Executive Committee of Better Health, that the Board of Directors of Better Health Incorporated would cause an audit of the books of Better Health Incorporated to be made by certified public accountants at an early date and would file a copy of such audit with the secretary.

It was the sense of the Council that the chairman of the Council be instructed to surrender up the present certificates evidencing the 200 shares owned, and that a new certificate of stock be issued in the name of the present chairman of the Council as trustee for this Association.

Action by the Council—On motion of Phillips, seconded by Kiger, it was

Resolved, That the General Counsel attend to proper transfer and issuance of new certificate for the 200 shares owned by the Association.

Discussion was had as to the desirability of setting aside approximately one page of CALIFORNIA AND WESTERN MEDICINE for the exploitation of Better Health, and the opinion was expressed that the editor be consulted in this matter.

Action by the Council—On motion of Phillips, seconded by Shephard, it was

Resolved, That the matter be referred to the Executive Committee of which the editor is a member.

**12. Science League of America**—Letter from the Science League of America requesting that we distribute certain pamphlets issued by them at this annual convention was read by Doctor Catton.

It was the sense of the Council that the secretary should write a courteous reply to this letter stating that the letter had arrived too late for consideration.

**13. Donation of Share of Better Health Stock**—General Counsel Peart informed the Council that James H. Parkinson had one share of Better Health stock which he wished to give to the Association.

Action by the Council—On motion of Kress, seconded by Kiger, it was

Resolved, That the donation of one share of Better Health stock offered by James H. Parkinson be accepted.

**14. American Registered Pharmacists**—Letter from the Los Angeles branch of the American Registered Pharmacists was read by Joseph Catton, in which the Council was asked to support a bill to be presented to the legislature providing that all pharmacists should be required to have a Pharmaceutical college education.

Action by the Council—On motion of Kress, seconded by Phillips, it was

Resolved, That the matter be laid on the table for future consideration.

The opinion was expressed that the Los Angeles County Medical Society should be on the lookout for further developments.

**15. Medical Legislation**—The general counsel advised

that many movements were afoot detrimental and dangerous to the public health and opposed to the progress of scientific medicine. The work which had been done in the past by Better Health was pointed out.

Action by the Council—On motion of Kress, seconded by Phillips, it was

Resolved, That the members of the California Medical Association be circularized through the secretary asking that they make a habit of keeping Better Health on their reception-room tables and that the attention of the members of the profession be called to the fact that this is the publication by means of which they will be able to keep in touch with public health questions and with problems that endanger scientific medicine.

**16. Amendments to the By-Laws**—The proposed amendments to the By-Laws, Chapter V, Sections 13 and 15, which provide that the General Counsel shall not attend executive meetings except when his presence is requested, was discussed. Mr. Peart suggested that the proposed amendment be adopted as a resolution, inasmuch as the proposed by-law would not be considered until the next annual meeting. Doctor Phillips spoke of the desirability of having the General Counsel attend all meetings of the Executive Committee.

Action by the Council—On motion of Kress, seconded by Kiger, it was

Resolved, That in order to make it easier for the General Counsel to absent himself from Executive Committee meetings, the General Counsel attend the meetings of the Executive Committee only when requested by that committee.

**17. Welfare Work**—The splendid work being carried on by the Welfare Council of San Diego, and the growing danger of cultists in various sections of California, was discussed. Dr. Lyell C. Kinney of San Diego then requested that the courtesy of the floor be given Martha Welpton, chairman of the Welfare Council, San Diego.

Doctor Welpton gave an interesting talk outlining the work done by her group, which was sponsored by all the leading clubs carrying on welfare work, including the Parent-Teacher Association and the Federation of Women's Clubs, and stated that all examinations and health work in connection with public welfare in San Diego is now being carried on by licensed M. D.'s.

Action by the Council—On motion of Kress, seconded by Coffey, it was

Resolved, That the thanks of the Council be extended to Doctor Welpton for her presentation of the views and plans for public welfare work; that Doctor Welpton be asked to present a written report on the subject and that such report be referred to the Executive Committee for examination and report to the Council.

**18. Date of 1927 Meeting**—As reply to the telegram sent to Olin West, secretary of the American Medical Association requesting the date of the next American Medical Association meeting had not been received, it was the sense of the Council that the 1927 annual meeting of the California Medical Association be held some time in April, approximately two weeks before the American Medical Association meeting, and that the exact date be fixed by the Executive Committee.

**19. Convention Rates**—The secretary informed the Council that the different railroad companies offered convention rates of approximately one and one-third of the regular expense to groups of members attending conventions.

Action by the Council—On motion of Kress, seconded by Kiger, it was

Resolved, That hereafter on every annual program and in journal announcements of the meetings of the Association there be printed full information regarding the securing of convention rates.

**20. Vote of Thanks**—Action by the Council—On motion of Peers, seconded by Kiger, it was

Resolved, That a vote of thanks be extended to the Arrangements Committee, the Entertainment Committee, the Press Association, the Publicity Committee, and Hotel Oakland for the courtesy received during this convention.

**21. Adjournment**—There being no further business, the Council adjourned to meet some time in the fall.

## NEVADA STATE MEDICAL ASSOCIATION

A. J. HOOD, M. D., Elko.....President  
 HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

The twenty-third annual meeting of the Nevada Medical Association is being held as we go to press. A full report should be published in the November issue.

**Nevada Medical Bulletin**—September 1, 1926—In a previous issue we asked our councilors to send in the names of the new physicians in their counties, but we have so far failed to hear from any of them. The following are members of the Council: G. L. Dempsey, W. L. Howell, J. C. Cherry, C. E. Sweezy, J. H. Hastings, D. A. Smith, W. J. Circe, W. H. Riley, C. E. Bullette, J. R. Eby, W. H. Brennen, G. L. Belanger, J. T. Rees, P. D. McLeod, F. M. West, H. L. Dalby, and M. J. Rand. We print the list for fear some may have forgotten that they are on the Board. We would appreciate it very much if these members will send us the names of all physicians that have located in their counties within the past year. We would also like to know of any removals during that time. There has been so many changes in the past two years that our records are somewhat chaotic, and your secretary would like to get the list correct.

## UTAH STATE MEDICAL ASSOCIATION

W. R. CALDERWOOD, M. D., Salt Lake.....President  
 E. H. SMITH, M. D., Ogden.....President-Elect  
 FRANK B. STEELE, M. D., Salt Lake.....Secretary  
 J. U. GIESY, M. D., Salt Lake.....Associate Editor for Utah

### BALANCE

It is a rather wonderful thing to achieve and keep. *Mens sana in corpore sano*—a sane mind in a sound body, was the ideal of the ancients, and undeniably the ancients were right. A sane mind is a balanced mind, and a sound body is a healthy body. Wherefore, literally, balance as applying to either one means health, and unbalance spells disease.

In the light of modern investigation, we are what our chromosomes make us. In a primary sense, that is. Because, literally, balance means the resultant effect of two forces acting one against the other—an activating, stimulating force, and an inhibiting and antagonistic force. With both forces equal, balance automatically results.

The recognition of the chromosome as applying to life generation, and individual characteristics, however, goes down rather deep. It now appears that these little genetic points of impulse determine in a very positive and, in some respects, an appalling fashion, not only the racial type of the developing zygote or fertilized genetic cell, but, through their character as expressed in the progenitors from which derived, the future welfare or "balance" of the individual specimen of that life type which shall develop from it in the natural course of events.

Normal growth now appears to depend not figuratively but literally upon a balanced ratio between

two forces—the one growth stimulating and the other growth inhibiting and directing. And these elements seem to be diffusible substances derived in the metabolic processes of the body from the food.

This is rather to be expected, but it brings up as applying to balance a sort of double parallel. Here we find that balance depends not only upon the chromosomic index—the genotype—but upon an extraneous, or environmental or paratype index, depending on influences largely outside the developing cell. And once more it is upon a balance in these two forces that normal growth depends.

As applying directly to medicine and the cure or prevention of that imbalance, which is disease, these considerations bring us unavoidably to the question of inheritance, indexed mainly by the chromosome of the individual—the "gens" so called of the progenitor handed on to his offspring, and to the balanced intake of those much-talked-of food elements known as vitamins.

Other things being equal, the "gens" of the zygote or fertilized genetic cell will mirror the life future of the offspring, handing on a tissue development in the later "phenotype" commensurate with the character of the parents, with a predisposition to certain diseases through tissue weaknesses from which those parents may have suffered prior to the reproduction of their species as embodied in the individual phenotype involved.

Paratypically speaking, these tissue weaknesses will be held in complete or partial abeyance or brought to active manifestation by the environment which the phenotype later meets.

And we may certainly regard the vitamin balance as one of the most potent of these paratype influences toward the maintenance or loss of health balance, since after independent life on the part of the individual is taken up, all balance of body metabolism must essentially be derived from the ingested food.

Speaking from this standpoint, it appears that the growth-stimulating element corresponds at least in its source to Vitamin B, and that the growth-inhibiting and directing element corresponds similarly to Vitamin A. Consequently normal growth and development depends upon a balanced intake of both.

And along this line it appears that such considerations open up a wide field of speculation as applying to both the problem of cancer and the anemias, with the exception of direct primary anemia, of course. In both there is so palpably an imbalance between the inhibitory and the stimulating elements. In pernicious anemia, especially, all co-ordination seems lost. And quite admittedly cancer is a condition characterized mainly by a perversion or un-directed cell multiplication more than anything else. The question therefore naturally arises as to whether or no cancer may not be so largely on the increase because of modern tendencies in the preparation and use of food. In other words, is cancer in reality a deficiency disease? Personally, we have thought so for years. But that is just our own opinion. And we are perfectly willing to admit that in considering any such issue as those we have sought to thus briefly stress, it is well to be sure that we maintain our own *balance* quite as a matter of course.



### REQUIESCAT

Ordinarily the passing of any one individual in a community makes but little difference, save to those closely bound to him who has departed by bonds of personal interest or sentiment.

But now and again in every country or nation there comes a man who by his strength, his wisdom, his sterling human qualities rises head and shoulders above the mass of his fellows, as a splendid tree in a forest may rise above the lesser growth, so that should any disaster befall it thereafter the landscape will never be quite the same.

Elsewhere in this issue we carry the notice of the death of Dr. Samuel H. Allen, which is such a loss to the medical world of the state; and the writer takes this opportunity to voice appreciation for a departed friend.

His work well done, may he rest in peace, his memory secure in the hearts of those he served.

### THEIR LOSS IS OURS

The Utah Medical Association wishes to convey to the California Medical Association our sincere sympathy for the loss sustained in the recent death of Dr. Saxton Pope. Past any question of bereavement of his loved ones and friends, the death of such a man cannot fail to prove a loss to the medical world at large.



SAMUEL H. ALLEN

Dr. Samuel H. Allen, 64, a prominent and learned physician, died at his home recently. He was a pioneer in the medical field of Utah, and in many ways contributed to the health and welfare of its people.

Doctor Allen was the senior member of the Intermountain Clinic and a member of the Utah Medical Association.

In 1879 "Sam" Allen was so poor that he was twitted by his school-fellows for wearing wooden shoes. In that year, an ambitious lad of 17, he drove from his home in Mount Pleasant to Salt Lake, a week's journey, to attend

school at the University of Utah. He was accompanied by his father, and they had packed a load of flour, bacon, apples, and potatoes with which to pay the boy's board.

His mother, a convert to Mormonism from Derbyshire, England, was one of the courageous pioneers who trudged across the prairies in a three months' march, with two children. His father came from Liverpool to New Orleans and thence to Utah in 1853, where he married Doctor Allen's mother in 1855.

Upon his graduation from the University of Utah, he attended the Brigham Young Academy. Later he went East to complete his studies at the College of Physicians and Surgeons at Baltimore, where he was graduated in 1890, one of the four students to receive a gold medal for excellent work in all branches. He was awarded, in addition, a year's free hospital internship.

He was married in 1893 at Mount Pleasant. He moved to Provo, where he performed the first appendicitis operation in Utah.

Following a postgraduate course at Johns Hopkins University, he moved to Salt Lake and entered into partnership with Dr. George W. Middleton. There followed other postgraduate study in Chicago and New York, trips to Mexico, Europe, South America, and islands in both the Pacific and Atlantic oceans.

Doctor Allen is survived by his wife, Mrs. Ida Allen; his son, Dr. M. Lowry Allen, and his daughters, Mrs. Ward R. McAllister, Mrs. Sayman Kerr, Mrs. Joseph E. Brewster, and Miss Marjorie Allen.

Utah News—September 13, marked the resumption of regular bi-monthly meetings by the Salt Lake County Medical Society. A good attendance listened to the report of the proceedings of the Pacific Northwest Medical Association as presented by E. F. Root, newly elected president of the Association, and F. D. Spencer, President F. H. Raley presided, and secretary M. M. Critchlow was the "cheild a-takin' notes." It is anticipated that a very interesting and instructive series of scientific papers will be presented during the coming winter. We have the word of the program committee for this.

Dean Porter of the University of Utah Medical School announces that twenty-eight students have been accepted for the ensuing term. Owing to the necessity of limiting the number of students, this represents but half of the applications for admission received. It is very gratifying to the Utah medical fraternity to know that the Utah School of Medicine has been accorded Class "A" standing. This insures the students completing the two-year course in the local institution acceptance into the other Class "A" medical schools. Recent changes in the staff of the University School of Medicine are the appointments of E. Le Compte and A. J. Alexander as lecturers in anatomy.

One of the most enjoyable and graceful recent events in the Salt Lake medical circles was the farewell banquet given to Major Samuel C. Gurney at the Hotel Utah by the members of the local medical reserve. For four years Major Gurney, as Medical Chief of the 104th Division, O. R., has worked with a wonderful spirit to build up the reserve. Largely to his efforts it is due that today Utah carries the highest per capita membership in the medical reserve of any of the states. In appreciation of that unflagging interest, the reserve officers tendered the banquet, and a memento of the years of association in the shape of a handsome ring. From Salt Lake he goes to the Canal Zone for a two years' tour of duty. We can only hope that at some future date the department will see fit to send him back to us.

Eight applicants for registration to practice medicine in Utah were successful in passing the recent examination before the Bureau of Registration; fifteen were admitted to practice by reciprocity and seven obstetricians passed the examination.

Applicants to practice medicine were: Chester Marsh of San Francisco, James Hayward of Logan, Leo C. Warenski of Murray, Paul V. Jameson of Spanish Fork, and Roy W. Robinson, Hector M. Ross, David B. Gottfredson and Fred M. Poulson, all of Salt Lake.

Those admitted by reciprocity were: William Monroe McKay, Cecil Stuart Wright, Sanji Oda of Ogden, Ernest Leroy Hansen of Logan, James Rex Marshall of Tooele,

Lloyd Lorenzo Cullimore of Pleasant Grove, and Clint A. Laffoon of Kamas, Stelios N. Sakorraphos, Beryl Iles Burns, Oza Joseph LaBarge, Wilford Joseph Reichmann, Charles Sanford Roller, Donald Charles Shelby, Moore Lowry Allen and Joseph Park Tuttle, all of Salt Lake.

To practice obstetrics were: Eunice Thornton of Midwest, Wyoming; Ettie E. Ballam and Willard Ballam of Logan, Avilda Cook of Cedar Valley, Annie J. Gunnison of Salt Lake, Lucinda Richards of Bountiful, Lydia A. Spencer of Lees Ferry, Arizona.

**Salt Lake County Medical Society** (by W. G. Schulte)—The meeting of September 13 was called to order by President F. H. Raley. W. G. Schulte, secretary pro tem. Thirty-two members were present.

E. F. Root, president of the Pacific Northwest Medical Association, reported on the recent meeting of that association. He gave the history of the organization and outlined its rapid growth. He discussed several of the papers that were read at the meeting. He announced that the next meeting would be in Boise, and urged all physicians to go. F. D. Spencer reported on some of the papers read at the meeting. Among those reported were papers by Carl F. Meyer, A. C. Ivy, J. W. Williams.

Application for membership signed by C. W. Countryman, and a transfer signed by E. P. Oldham were read.

## MEDICAL AND HEALTH AGENCY NEWS

The California Group Clinic of Los Angeles, operated by Mr. M. E. Diebold, closed its doors on August 31, according to the report of special agent Albert Carter of the Board of Medical Examiners. The manager claims to have lost considerable money in this another scheme to render medical service for ridiculously small fees.

It takes more than machine-made quantity production methods to serve the sick.

An amalgamation was completed August 15 between the Clara Barton Hospital and the Hollywood Hospital whereby these two organizations united, closing out the Clara Barton Hospital and moving the business to the Hollywood Hospital. The training school from the Clara Barton Hospital has been moved to the Hollywood Hospital and is functioning there. Miss Elizabeth Bachinger, directress of nurses at the Clara Barton Hospital, became directress of nurses of the new organization, and Miss Edith Hodgins, instructress of nurses, also remains with the training school. The new organization will be known as the Hollywood Clara Barton Memorial Hospital Association.

On July 29, construction commenced on the new wing to the Hollywood Hospital. This wing will conform to the structure of the present hospital. It will be reinforced concrete, Class "A," and will add 150 beds. It is expected that part will be ready for occupancy February 1, 1927, and that the whole addition will be finished before April 1.

Saint Joseph's Hospital Staff (San Francisco) discussed progress in obstetrical surgery at a recent meeting. Case reports were presented by Ernst Gehrels (peritonitis), Howard Dixon (lobar pneumonia), Arthur Sonnenberg (nephritis), A. S. Musante (fractured skull), and Samuel Barmak (cancer).

Roy Morris spoke on "Observations from Eastern Medical Centers," as they may be made profitable to the physician visitor.

Ludwig Emge in discussing advances in obstetrical surgery said:

Prophylactic episiotomy takes a foremost place. This procedure, by no means new, marks an important step toward the preservation of the perineum. The slightly deviated midline operation is the most feasible and serviceable type. Careful technique must be observed. Many

obstetricians have abandoned silkworm gut sutures in perineal repairs and use forty-day chromic catgut instead, the patient's comfort being markedly benefited by this procedure. Next in importance is the Gwathmey method of obstetrical analgesia in its relation to cervical trauma. A large number of women delivered by this method were found to have greatly lessened the hazard of cervical laceration. Cervical laceration of sufficient side should be repaired before the patient leaves the hospital. Immediate and intermediate methods have been used, but cervical repair is better in the intermediate group, because the average practitioner has less trouble in detecting cervical laceration eight or nine days after delivery.

The low or cervical Caesarean section is accepted by the well-trained obstetrician as the operation of choice in certain patients. Its cardinal virtues, indications, and contraindications must be remembered. The technique of this operation is more difficult than that of the classical section.

The advantages and comparatively narrow field of the new Kjelland forceps must be understood in using these improved instruments.

D. B. Plymire discussed Emge's paper and touched on "twilight sleep" anesthesia. The program for October 13 includes: Newer methods of gall bladder treatment, by G. D. Schoonmaker, and handling of mental, drug and alcoholic patients, by V. P. Mulligan.

The Women Physicians' Club of San Francisco on September 7, 1926, entertained Miss Grace Abbott, chief of the Children's Bureau, Washington, D. C., at a dinner at the Clift Hotel. Louise B. Deal presided. Edna Barney, secretary, in her report stated that the membership of the club has now passed the one hundred mark. Ellen Stadtmuller introduced the speakers. A. Maximova-Kulaev gave an account of public health conditions in Russia. Among other interesting facts she gave the following:

"Fifty per. cent of the physicians practicing in Russia are women, and there is no sex discrimination in regard to civil or university positions. Practically all physicians are employed by the government, and their salaries, which range from \$50 to \$150 a month, are barely sufficient for a modest existence. In Siberia, where the only means of transportation is the horse, one physician must cover an area of eighty miles. In the first nine months of 1924 there were in Russia: 109,000 cases of typhus exanthematicus; 41,000 cases of typhus recurrence; 90,000 cases of typhus abdominalis (typhoid fever); 12,000 cases of malaria, with a mortality of 5 per cent. Seventy-five thousand kilograms of quinin were imported by the commissariat of public health.

"In addition there have been epidemics of encephalitis, anthrax, variola, cholera, rabies, and trachoma. In 1925 in Ukraïn there were 21,000 cases of scarlet fever among children; in and around Rostov 200 cases of leprosy. In some small nationalities in the Chechnia Mountains a survey showed that 70 per cent of the inhabitants have syphilis. Between 1914 and 1925 more than 3000 physicians died from infectious diseases. In some instances they were killed by the ignorant masses who accused them of having caused the epidemic.

"Despite all discouragements the medical profession are carrying on scientific work in all the centers of Russia, and have well-organized medical societies with its center in Moscow and local branches throughout the country."

Mariana Bertola, who has just returned from Europe, characterized the dole system now in force in England as utterly demoralizing. She told of families which included two or more able-bodied men who are living in idleness and subsisting on the dole, while property owners are being taxed out of house and home to maintain the system. This, together with the coal strike with its resulting evils and the enormous consumption of liquor, all found their reflection in the mental and physical condition of the children. In contrast, everyone in Italy is working, and she saw only one beggar while there. While the dictatorship of Mussolini would be resented by Americans, he has brought order out of chaos, and an excellent program of public health is planned and being put into force.

Miss Abbott referred to California as the women doctor's paradise. She stated that, while child welfare is of



equal importance to men and women, the latter have always taken a more active interest and put forth more strenuous efforts to make the United States safe for children. The child is the barometer of the social, economic, and medical condition of the community. While the cities of the United States compare favorably with those of other countries, the isolated districts are in many instances woefully lacking in intelligent interest on the subject of child welfare. It is on these areas that the Children's Bureau is concentrating its greatest effort. The aim of the Bureau is to educate the parents to the viewpoint that every child should be under the care of a physician and have periodic health examinations.

**Mount Zion Hospital**—The purpose of the weekly clinical pathological conference is to critically review records of all deaths that have occurred on either private or free service of the hospital during the preceding week.

Discussion was opened with a case of gangrenous appendix and generalized peritonitis, with marked cyanosis a prominent symptom. Patient was a male 24, suffering pain in the abdomen for two days, during which time he had taken considerable purgatives before calling a doctor. When seen by the doctor and advised to go to the hospital, patient refused for another thirty-six hours, finally consenting to operation. During operation it was noted that patient was taking the anesthetic extremely badly, and was cyanotic throughout the operation. On opening the abdomen a gangrenous appendix with a generalized purulent peritonitis was found. Simple drainage performed. Patient returned to bed in poor condition, extremely cyanotic and died the following day.

Dr. Leo Munter considered the patient's cyanosis a very unfavorable prognostic sign; but did not understand its cause, as heart and lungs were negative.

Dr. Charles G. Levison pointed out that the occurrence of cyanosis was a common condition accompanying profound toxemia of peritonitis; furthermore, that a patient who has been diagnosed as acute appendicitis should not be given morphin until in the ambulance on the way to the operating room.

Dr. Adolph Nahman stated that a very definite stand should be taken by the medical profession on the question of insisting on early operation for appendicitis where the patient refuses such advice. The safer course for the doctor is to withdraw from the case.

The record was presented of a man 26 who had taken lysol with suicidal intent. He was found in a semi-comatose condition about twelve hours after having taken the poison, and taken to the Emergency Hospital. Examination revealed extreme shock, board-like rigidity of entire abdomen, suggestive of a perforated viscus. Exploratory laparotomy proved to be negative for any evidences of perforation or peritonitis. The patient subsequently developed bilateral lobar pneumonia and died within three days.

In the course of the discussion Dr. F. I. Harris stated that he had never seen a case of perforated viscus from lysol poisoning, and thought that if the patient had taken a sufficient quantity of lysol to cause immediate perforation of the stomach death would probably have resulted from the shock of the lysol poisoning before he could have been seen by a physician. Dr. Harold Brunn also had never seen a case of perforation of the stomach from lysol poisoning.

It was felt that in this particular case the abdominal findings were due to reflex rigidity from the pneumonic process which undoubtedly had started previous to operative interference. Autopsy findings confirmed this impression, as it showed no pathological changes in the abdomen, but a complete pneumonic solidification of both lungs.

The record of a patient with vascular cerebral hemorrhage causing bilateral paralysis and symptoms simulating decerebrate paralysis was discussed. Male, 51, seen for the first time at 6 p. m., at which time he was in state of semi-coma, with a spastic paralysis of the entire right side. Heart and respirations normal. Patient was transferred to hospital, and at 8 p. m. began to have

repeated convulsions at frequent intervals accompanied by a deep coma, Cheyne-Stoke respiration, and generalized spastic paralysis involving extremities of both sides, the individual muscles showing myoclonic contractions, and body arched in opisthotonos. Conjugate deviation of eyes was present. Pupils dilated. Ophthalmoscopic examination of fundi showed marked early papulo edema of the discs, most marked on the left side.

Cisterna-Magna puncture done and about 10 cc. bright red cerebral spinal fluid removed; and 16 ounces of blood removed by venesection. Patient continued in a deep coma and expired within two hours from respiratory failure. Blood pressure at the onset of attack was 180/40, and when taken immediately after venesection was found to be 220/.

Doctor Firestone brought out the fact that there is a poor prognosis in the massive hypertensive type of cerebral hemorrhage.

Dr. Julian Wolfsohn enlarged on the advantage of Cisterna-Magna puncture over the routine spinal puncture in cerebral hemorrhage, and confirmed the value of venesection, although in this particular instance the hypertension persisted despite such drastic measures for relief.

## NEWS ITEMS FROM CALIFORNIA BOARD OF MEDICAL EXAMINERS

By CHARLES B. PINKHAM, M. D., *Secretary*

Dr. Walter Anderson Pleaded not guilty today in the Superior Court to a charge of attacking Gloria Delmar, 19, film actress, last June. His trial was set for October 5.—Los Angeles Herald, August 23, 1926.

According to the Los Angeles Record of August 21, 1926, Dr. William Balsinger, plastic surgeon, was granted a judgment for \$75, fee due him for remodeling the nose of Rena Amato, film actress, who last year obtained a \$25,000 judgment against Dr. Gertrude Steele, naturopath, whose license was revoked February 10, 1925, as noted in "News Items" of February, 1925, issue.

The "face peel" operation of the beauty specialists claimed another victim when Louise Wulburs died suddenly following an application of a phenol solution to her face. The records of the Board of Medical Examiners show that several other deaths are reported to have resulted from the absorption of carbolic acid applied to the face by so-called beauty specialists in the operation known as "face peel."

C. L. Brakeiron, a recent arrival in Los Angeles, was charged by H. A. Miller of Berkeley, inspector for the State Board of Chiropractors, with posing as a chiropractor when he had no license to practice, according to the Eureka Standard of September 4, 1926.

Dr. L. Burcans, proprietor of the Elite Pharmacy at 3030 West Pico Street, was under arrest today, and several cases of liquor said to have been found in his store by officers were being held as evidence, according to a report by federal prohibition agents.—Los Angeles Herald, September 1, 1926.

Orange County chiropractors want a department reserved for drugless practice in the proposed new county hospital if such an institution is built. Claiming that such a hospital should be built to serve the needs of all the taxpayers and that fair and constitutional rights be granted equally to drugless practitioners as well as the medical doctors, the Orange County Chiropractors' Association has addressed a communication to the county supervisors, setting forth their position. . . .—Santa Ana Register, August 20, 1926.

According to the Los Angeles Times of September 4, 1926, the Board of Chiropractic Examiners has continued the hearing of Charles H. Wood, president of the Los Angeles College of Chiropractic, charged with having obtained a California chiropractic license through fraud and deception. The case was continued to obtain further depositions from the East, it being alleged that the chiropractic college of which Doctor Wood says he is a graduate and where he was a resident student has no record of his having completed the course.

Dr. H. H. Ells, well-known physician and surgeon, who has been under surveillance for some time as a suspected seller of dope to addicts, was arrested today on a charge of violating state narcotic laws. According to Inspector Earle of the State Board of Pharmacy, Doctor Ells sold a small quantity of morphin for \$15 to a woman operative sent into his office to make the purchase. He denied the allegation, but was to be arraigned in court today.—Los Angeles Record, September 1, 1926.

Despite strenuous objections made by his counsel, the case against W. Roy Graham, asserted Alhambra doctor, was on the calendar for trial today before Superior Judge Charles S. Burnell on forty-two counts charging him with grand larceny and embezzlement. . . . More than \$10,000 was alleged to have been fraudulently obtained by the doctor from Mr. and Mrs. S. Mason Meek of 104 Los Tunas Street, San Gabriel. . . . (Los Angeles Herald, August 13, 1926). No one by the name of W. Roy Graham is licensed to practice any system of the healing art in the state of California. Prior mention appears in "News Items," February and June, 1926, issues.

Dorothy Holmes, chiropractor, who recently arrived in Eureka from Los Angeles, according to the Eureka Times of September 5, 1926, was taken into custody on the charge of violating the California law concerning the practice of chiropractic by posing as a chiropractor although she had no license.

A complaint has been filed calling Harrison B. Hulse, M. D., of Los Angeles before the board at the October meeting, based upon his plea of guilty on August 2, 1926, to violation of the State Poison Act re narcotics, he having been sentenced to serve sixty days in jail, which sentence was suspended.

The recent Civil Service examination for investigators for the Board of Medical Examiners, Osteopathic Examiners, Chiropractic Examiners, Dental Examiners, and State Board of Pharmacy, resulted in twenty-nine names being placed on the eligible list for positions which pay from \$135 to \$200 per month.

Revocation of the chiropractic licenses of Ray LaBarre and James Compton, members of the first acting Board of Chiropractic Examiners of the state of California, is asked in applications filed with the board yesterday by Percy Purviance of Berkeley. Purviance voices the contention that the two chiropractors have not pursued resident courses in a regularly incorporated chiropractic school and have not practiced chiropractic in California for a period of three years.—Oakland Tribune, August 15, 1926.

Dr. F. H. McCarl, Long Beach physician, was wounded in the leg yesterday by a stray bullet in a gun battle between two other men, according to Long Beach police reports. . . . (Los Angeles Illustrated Daily News, August 13, 1926). The records of the Board of Medical Examiners, Osteopathic Examiners, and Chiropractic Examiners show no one by the name of F. H. McCarl licensed to practice in the state of California.

According to the Fresno Republican of August 18, 1926, two felonies, forgery and sending a telegram to deceive are charged against Dr. Carl H. McPheeters, mentioned in "News Items" of September, 1926.

According to the San Francisco Call of August 11, 1926, Rev. F. G. Collett, vice-president of the Reelimo Film Syndicate, is alleged to have charged F. E. Miller, ousted treasurer of the syndicate, with embezzlement. F. E. Miller claimed "that he was en route to Mexico to meet Orlando Edgar Miller of psychoanalysis fame, and that he had lost \$18,000 endorsing notes in connection with the film concern." It is reported that the charge was later dismissed.

According to the Oakland Times of August 17, 1926, Percy Purviance, manager of the Berkeley Chiropractic College and High School, denied in his answer the allegations upon which the Chiropractic Board based its suit to abate his schools, claiming that the board was without authority or jurisdiction in attempting to prevent chiropractic institutions from doing business. "The Chiropractic Board in its suit accused Purviance of operating a diploma mill, wholly designed to issue diplomas to unqualified persons."

Holding that Mrs. Louise Wulbers, who died while undergoing a "knifeless facial operation" at the hands of Dr. Zailick Saltzman, September 9, died as a result of shock, excitement, and the absorption of carbolic acid, a coroner's jury today recommended legislation against the use of carbolic acid or its agents by beauty specialists in beauty parlors. . . .—San Francisco Bulletin, September 14, 1926.

Ringling the door bell at the home of C. B. Willoughby, prominent physician of 1923 West Browning Boulevard, shortly after midnight, while a party was in progress, two youthful bandits entered with drawn guns and relieved the guests of \$100 in cash and a gold watch (Los Angeles Record, August 20, 1926). The records of the Board of Medical Examiners, Osteopathic Examiners, and Chiropractic Examiners do not show anyone by the name of C. B. Willoughby licensed to practice in the state of California.

According to the San Francisco Examiner of September 16, 1926, Dr. A. M. Waters of Los Angeles, who has come to the notice of the investigation department of the Board of Medical Examiners on prior occasions, committed suicide on the eve of his appearance in court on a grand larceny charge involving \$1500. Mrs. Seilaff, following her arrest, declared that Aimee Semple McPherson had told her Doctor Waters had promised to produce a "Miss X." and that she, Mrs. McPherson, had given him \$125. Mrs. Weisman said that Mrs. McPherson told her Doctor Waters failed to get a masquerader, saying that "his party had got cold feet." A report from the Michigan board in 1915 related that the certificate of Archibald M. Waters had been revoked in 1917, "obtained by fraud."

## READERS' FORUM

Santa Barbara, California,  
September 13, 1926.

Dear Editor—I have received the copy of CALIFORNIA AND WESTERN MEDICINE containing my article on "Education of the Public in Elementary Medical Science." I am very much pleased with the way in which this article has been issued, as well as the complimentary comments you have made concerning my work, and I want to thank you for all this publicity. You perhaps do not realize what it means to me personally in a community of this kind in the work that I am trying to do.

Our Association has just inaugurated a Prize Essay Contest for the best essay on diphtheria to be competed for by parents of children whose ages make them liable to contract this disease. It has been actuated by the campaign now being waged throughout the country for the immunization of children. One of the physicians here told me today that the State Board of Health is not behind this campaign, which surprised me very much.

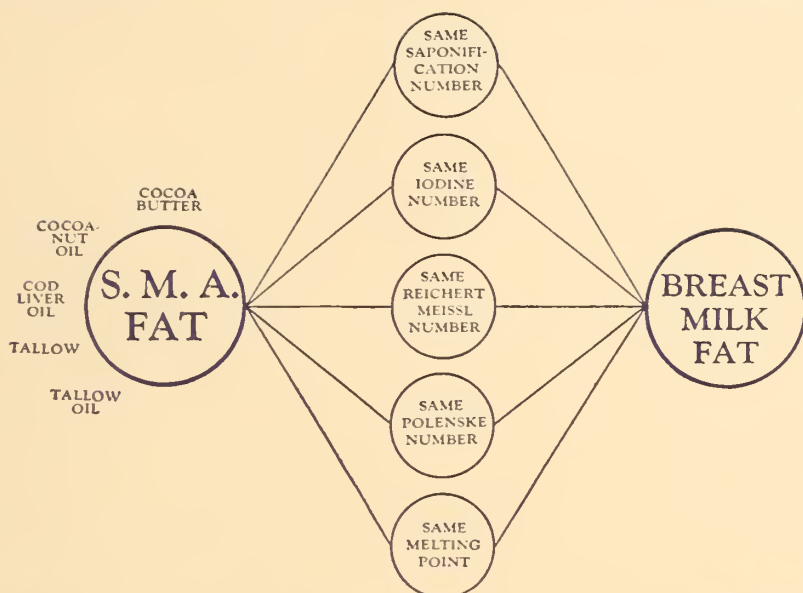
GEORGE E. COLEMAN,  
President, Santa Barbara Branch American  
Association for Medical Progress.

Deaths from wood and denatured alcohol poisoning numbered ten during the six months' period. During the same months of 1925 and 1924 there were fifteen and eight deaths, respectively. Deaths from this form of acute poisoning are unquestionably less frequent than they were in 1920 and 1921. Prior to these years, however, it was a comparatively rare occurrence to have a death reported from this cause.—Statistical Bulletin, Metropolitan Life Insurance Company.

Alcohol is denatured by our government.

Any disturbance of the carefully built-up equilibrium between parasite and host would tend to bring about serious consequences for either. A sudden increase in virulence of the parasites to which the human body had previously acquired tolerance would spell disaster to the latter, while a decrease in the aggressivity on the part of the former or an increase in the resistance of the host would correspondingly prevent infection.—Science, August 13, 1916.





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# CALIFORNIA AND WESTERN MEDICINE

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## ACUTE LEUKEMIA AND AGRANULOCYTIC ANGINA ASSOCIATED WITH OR FOLLOWING THE REMOVAL OF TEETH

REPORT OF FOUR CASES

By HAROLD P. HILL \*

THE following case reports evidence direct association of certain mouth infections with the extraction of teeth. The blood pictures are the outstanding features and, together with their associated clinical manifestations, will be made the subject of comment.

CASE I—Mr. C. D. B., age 68. Occupation, capitalist. Family history: One blood relative had died of pernicious anemia. In the preceding years the patient's complaints had been principally gastrointestinal, and had been due to gall stones. At these times he had complained of feeling "toxic." A physical examination made one month previous to the extraction of teeth was essentially negative. The blood count, taken one year previously, showed hemoglobin, 80 per cent; red cells, 5,200,000; leucocytes, 10,200. An x-ray of his teeth taken two years before disclosed apical abscesses of two inferior left molars. Because the patient considered the teeth might have some influence on the "toxic" spells, the dentist finally persuaded him to have them extracted. This was done on July 13, 1923. No difficulty was experienced in the extraction. Three days after he felt ill with chilly sensations, prostration, and temperature. There was some swelling and tenderness of the left submaxillary glands. The area of teeth extraction was swollen and bluish and showed no tendency toward healing. A bloody purulent discharge was present. Physical examination was otherwise negative. There was no general adenopathy or splenic enlargement. The patient was decidedly toxic. The leucocytes were 90,000. The urine had a trace of albumin. On the following day the leucocytes were 102,000. Of these 99 per cent were mononuclear cells and 1 per cent polymorphonuclear cells. The number of leucocytes progressively increased to 366,000, with mononuclear cells nearly 100 per cent. The clinical course of the disease was marked by a profound toxemia, fever, prostration, and delirium. The tissue in the region of the extracted teeth became gangrenous with a foul-smelling discharge. A purpuric rash developed over the body and extremities. Anemia was marked. General adenopathy was never present nor was the spleen palpable. A terminal bronchopneumonia developed. His temperature ranged from 100 to 107.5. Pulse 70 to 140, respiration 20 to 40. The blood culture was negative. Death occurred July 24. Duration of the illness, nine days. A complete autopsy was made. Clinical and pathological diagnosis, acute leukemia, myelogenic. (Complete blood counts are shown in Table I.)

In Tables I and II the term mononuclear refers to cells with a single nucleus, and no attempt is made to classify the cells. In the beginning the average cell was of medium size, changing to a predominating large cell as the disease progressed. A descriptive differential count was made by Dr. William Ophuls on July 21 as follows: large cells with large, deeply staining nucleus and narrow rim of pale-blue protoplasm in which there are few neutrophilic granules (primitive myelocytes), 89 per cent; larger cells with more protoplasm of similar appearance and large nucleus showing coarse chromatin fibers (probably same cells as 1 in process of division, 5 per cent; large lymphocytes, 2 per cent; small lymphocytes, 1 per cent; polymorphonuclear neutrophils, 3 per cent; no eosinophile cells seen. Many micro and poikilocytes, no macrocytes, no nucleated reds seen. No bacteria seen.

*Autopsy* revealed the absence of any enlargement of the lymphnodes. The spleen was of normal size and grossly of normal appearance. The liver was slightly enlarged. Many primitive myelocytes were found in the splenic pulp, also in the sinusoids and in the periportal connective tissue of the liver. The bone marrow was of a grayish brown color and contained enormous numbers of primitive myelocytes with very delicate pale-blue protoplasm in which there were many extremely fine neutrophilic granules. The number of fully developed neutrophilic cells was very small and no eosinophilic cells were found at all. In spite of the careful search of specimens stained intensely with Giemsa's stain, no bacteria were discovered in smears of the marrow. The findings clearly establish the diagnosis, "acute myelocytic leukemia."

*Case Comment*—It is unfortunate that a blood count was not made just before the extraction of the teeth. The patient was in usual good health. The sudden onset, course, type of cells, lack of general adenopathy and splenic enlargement is strongly against a pre-existing leukemia. The clinical course of the disease was not different from that of an acute severe infection due to pyogenic organisms, the blood picture was the principal differential factor. There was a marked anemia of the secondary type and a hemorrhagic diathesis. The blood culture was negative, and smears and culture of the bone marrow

\* Harold Phillips Hill (501 Fitzhugh Building, San Francisco). M.D. University of California, 1901; A.B. Stanford, 1898. Present hospital connections: Chief of staff, St. Luke's Hospital; chief medical wards, Stanford Service; San Francisco Hospital. Present appointments: Clinical professor of medicine, Stanford Medical School. Practice limited to Medicine.

were negative for organisms. The pathological findings were those of a myelogenous leukemia.

CASE II—Mrs. W. F. R., age 35. Seen in consultation with Dr. P. A. Bill, March 7, 1925.

The past history was negative. She had been a strong active housewife. Three weeks previous to consulting Doctor Bill she had had a right inferior bicuspid or molar extracted. This was followed by pain in the jaw and ear of that side. The gums continued to bother the patient, and after three weeks the gums, throat, and cervical glands became so swollen and painful that she consulted her physician. At this time she had a grayish exudate over the gums and tonsils. A smear taken showed a large number of Vincent's angina organisms. She was given local treatment and a small dose of neosalvarsan. In spite of treatment the local and constitutional symptoms increased and she was sent to Saint Luke's Hospital.

On physical examination the patient was found to be markedly toxic and delirious. The temperature was 103. Pulse, 100. Respiration, 20. The tonsils and gums were covered with a grayish foul-smelling exudate. The area of

TABLE I

Date	Hb.	R.B.C.	W.B.C.	Polys.	Mono.
April 4, 1922.....	80	5,200,000	10,200		
July 16, 1923.....			90,000		
July 17, 1923.....			102,500	1	99
July 18, 1923.....	47	2,715,000	142,000	1	99
July 19, 1923.....			180,000	1	99
July 20, 1923.....	41	2,850,000	218,000		100
July 21, 1923.....			286,000	3	99
July 22, 1923.....	43	2,460,000	248,000	½	99½
July 24, 1923.....			366,000		100

the extracted tooth was still unhealed. The cervical glands of both sides were greatly swollen and tender. There was no marked enlargement of other glands. The spleen was not palpable.

The leucocyte count on entrance to the hospital was 41,000. Polymorphonuclear cells 12 per cent, mononuclear cells 88 per cent. The number of white cells increased progressively to 245,000. Polymorphonuclear cells 4 per cent, mononuclear cells 96 per cent. The predominant mononuclear was the large-sized cell as described in Case I. Complete blood counts are given in Table II.

The clinical course was that of a marked toxemia with high temperature, delirium, and hemorrhage from the gums, bowels, and stomach. A marked purpuric rash developed over the body and extremities. There was pronounced anemia. The duration of the disease in the hospital was six days and about two weeks from the time of onset. Blood cultures were negative. The urine showed a trace of albumin; no casts. Smears from the gums and throat showed a large number of Vincent's spirillae and fusiform rods mixed with other organisms. Throat cultures gave a gram positive diplococci in chains. The patient died March 12. Diagnosis: acute leukemia—myelogenous.

TABLE II

Date	Hb.	R.B.C.	W.B.C.	Polys.	Mono.	Eosin
March 6, 1925..	55	3,900,000	41,000	12	88	
March 8, 1925..		4,000,000	75,000	4	96	
March 9, 1925..			95,000	3	96	1
March 10, 1925..			104,000	1	99	
March 11, 1925..			151,000	3	97	
March 12, 1925..	45	3,150,000	245,000	4	96	

*Case Comment*—This was a parallel to Case I, with an added extensive Vincent's infection of the throat and mouth. The clinical course and blood pictures were practically identical. In both we have the association of an acute infection with a rapidly

developing toxic state and the blood picture of acute leukemia. There is an increasing tendency to consider acute leukemia of infectious origin, and it is suggested that Cases I and II of this series seem to substantiate this point of view and to have been associated with infection following the extraction of teeth.

CASE III—Mrs. McC. K., age 46. Referred October 6 for a sciatica of nine months duration. The usual sites for focal infections had been carefully investigated and had been found negative. The x-ray of the teeth was negative for apical infection. There were two impacted lower molars. One infected tooth had been removed two years previously.

Examination on October 6 showed a healthy-looking woman of middle age, sciatic pain the principal complaint. Apart from a moderate hypertension, colonic tenderness and a typical mucous colitis stool, the findings were essentially negative. The blood count at this time showed: hemoglobin, 80 per cent; red blood count, 4,400,000; white blood count, 9,050; polymorphonuclears, 57 per cent; lymphocytes, 43 per cent. The patient improved on rest, diet, and sacroiliac support.

The dentist advised the removal of the impacted molars. The teeth were removed November 17, 1925. There was considerable difficulty in removing the teeth, with resulting trauma and injury to nerves. She subsequently complained of numbness of the face and the right side of the tongue, with stiffness and soreness of the neck muscles. Six days following the extraction a hemorrhage occurred from the right tooth socket, and this was followed by an increasing complaint of soreness of the neck and of some difficulty in swallowing. Three days after there was a rise in temperature to 100 degrees F. The leucocyte count taken at this time was 2000. Lymphocytes, 96 per cent. Transitionals, 4 per cent.

On physical examination the neck was moderately swollen. No glands were palpable. There was no exudate on the gums or throat. The mucous membrane at the sites of operation looked fairly normal, but there had been no tendency toward healing and by separating the edges of the incision the tissue surrounding the cavities was seen to be necrotic. Otherwise the physical examination was negative.

The disease ran a toxic course accompanied by an irregular temperature and increased pulse rate. There was no marked delirium, but there was toward the end a marked euphoria. The tissue within the tooth cavities became gangrenous, and the breath had the sweetish, foul odor of gangrene. A small patch of exudate developed on the left tonsil. This may have possibly been an extension of the gangrenous process backward from the left tooth socket. A few vesicles were seen on the hard palate. Icterus developed of a brilliant orange hue, with slight enlargement of the liver and normal-colored stools. There was retention of urine necessitating catheterization. She complained of hemorrhoids, but no rectal exudate or ulcers were observed. The vulva became red and swollen and a gangrenous bulla developed on the right labium. No petechia, purpura, adenopathy or enlargement of the spleen were present at any time. The total leucocyte count progressively dropped to 200 cells. Lymphocytes, 100 per cent. Complete blood counts are given in Table III. The temperature ranged from 99 to 104. Pulse from 108 to 126. Respiration from 20 to 26. Terminal postbasal rates occurred with increase in respiration to 48.

Smears from the teeth cavities and tonsils showed the organisms of Vincent's angina mixed with numerous streptococci. Cultures showed a mixed growth of non-

TABLE III

	Hb.	R.B.C.	W.B.C.	Polys.	Lymph.	Trans.	Myel.	Platelets
October 8, 1925.....			9,050	57	43			
November 30, 1925.....	80	4,400,000	2,000	0	96	4		
December 1, 1925.....			3,600	0	94		6	487,000
December 2, 1925.....			2,200	0	96		4	
December 3, 1925.....			800	0	96		4	
December 4, 1925.....			820	0	96		4	
December 5, 1925.....			500	0	100			
December 6, 1925.....	60	3,800,000	400	0	100			
December 7, 1925.....		3,630,000	300	0	100			
December 8, 1925.....			200	0	100			
December 10, 1925.....			400	0	100			



TABLE IV

Date	Hb.	R.B.C.	W.B.C.	Polys.	Lymph.	Lg. Mono.	Trans.	Eosin	Platelets
1-1-26	70	3,800,000	6,600	77	23				
1-11-26			3,600	3	97				
1-12-26	67-70	3,400,000	3,600	2	92				
1-14-26		3,400,000	2,800	5	89	4	2		
1-15-26	55	3,420,000	4,000	13	69	7	11		10,000
1-16-26			4,000	36	53	2	9		10,000
1-18-26		3,750,000	14,000	38	58	2		2	10,000
1-19-26			19,000	60	38			2	20,000
1-20-26			29,400	70	28			2	30,000
1-21-26			20,000	70	28			2	30,000
1-22-26			21,200	87	12			1	150,000
1-23-26			15,000	73	25			2	
1-24-26	54	4,100,000	9,600	70	27	2		1	150,000
1-25-26	60	4,000,000	15,000	77	23				150,000
1-26-26			10,000	68	30	2			180,000
1-27-26			9,800	76	24				
1-28-26			11,000	72	26	2			
1-29-26			8,000	66	34				200,000
2-5-26	60	4,700,000	7,200	53	43	4			
2-12-26	70	4,640,000	8,600	55	43	2			

hemolytic streptococci and staphylococci albus and a moderate number of colon bacilli. No bacillus pyocyaneus was found.

Death occurred December 12, 1925. Duration of the disease, fifteen days from the onset of the fever and twenty-five days following the extraction of the teeth. Diagnosis: Agranulocytic angina.

*Case Comment*—There have been recently a few cases reported of a disease termed agranulocytic angina or agranulocytosis. In this case the sex, age, clinical picture, icterus, blood findings and fatal issue were characteristic of the disease as described. Previous cases reported have been associated with an ulcerative angina. In our case there was a slight exudate on one tonsil and a few small vesicles on the hard palate, otherwise the lesions were confined to the cavities of the extracted teeth and consisted of shreddy, necrotic gangrenous tissue. In the blood count will be noted the slight reduction of red cells and of the hemoglobin with a marked reduction of all types of leucocytes, reaching a low level of 200 cells, with an entire absence of the granular cells. The blood count was normal just previous to extraction. The teeth extracted were vital teeth. There was no apical infection.

*CASE IV*—Mrs. B. A. Seen by courtesy of Doctor Ausbaugh. The patient entered the hospital with a complaint of mental exhaustion. There was a history of recent extensive herpes zoster. The physical examination was essentially negative. The hemoglobin was 70 per cent. Red blood count, 3,800,000. White blood count, 6600. Polymorphonuclear cells, 77 per cent. Lymphocytes, 23 per cent. Eight teeth were found infected and were removed. The removed molars were carious and there was marked infection around the corona of all the extracted teeth.

Following the removal of the teeth, the patient developed a fever and a mildly toxic state. Her gums, particularly along the line of extraction, were covered with a grayish exudate giving a slight gangrenous odor to the breath. The tonsils were enlarged and a few small white patches were seen on the left tonsil. The vagina and rectum were normal. There was no swelling of the lymphatic glands and the spleen was not palpable. There was a slight yellow tint to the skin. She had no anemia. Temperature 104. Pulse 120. Respiration 28. The blood count showed: 3600 leucocytes; polymorphonuclear cells, 3 per cent; lymphocytes, 97 per cent. The blood picture varied considerably, as shown in Table IV. Blood cultures, Widal and Wassermann, were negative. The temperature fell to normal and the blood count, after a high polymorphonuclear leucocytosis, became normal. The patient recovered.

*Case Comment*—The blood count before extraction was normal. Soon after extraction the clinical and blood pictures were comparable to Case III of agranulocytic angina. There was an exudate on the gums, particularly along the line of extracted teeth,

fever, toxemia, slight icterus, and a leucocyte count reaching a low point of 2000 with 89 per cent lymphocytes and 5 per cent granular cells. The leucocyte count then increased, the polymorphonuclear percentage increased until the total count reached 29,400 with 70 per cent polymorphonuclear cells, 28 per cent lymphocytes, and 2 per cent eosinophiles. With the increase in the blood count the general symptoms improved. The patient then had a normal temperature and pulse with a leucocyte count of 29,400. The leucocyte count gradually returned to normal.

#### GENERAL COMMENT

It is not wise to draw too definite conclusions from these cases. However, they all have certain principal features in common; local infection following the extraction of teeth, a clinical course of an acute infection, a cystological and pathological evidence of involvement of the bone marrow. This suggests that this group of cases now classified clinically, principally by their blood findings, are closely related and are due to the action of infections directly or through their toxins on the hemopoietic organs, particularly on the bone marrow. It may be that the type of infection or the reaction of the individual determines the response. In Case IV of our series the individual apparently reacted to the same infection in the beginning with a pronounced agranulocytic reaction followed by a pronounced polymorphonuclear reaction.

Theoretically, this suggests that the infection or its noxious agent affected the bone marrow and destroyed or inhibited the production of the granular cells. When this inhibition or destruction was overcome the bone marrow responded with an increased production similar to the usual reaction seen in the response to pyogenic infections.

Longcope in his report of ten cases of infectious mononucleosis agrees that there is no direct evidence to uphold the assumption that mononucleosis may be due to a constant individual characteristic. He bases his opinion on Sprunt's and Evan's report of an individual who had suffered an attack of infectious mononucleosis and subsequently gave a perfectly normal polymorphonuclear response to a simple pyogenic infection.

Last April I saw a patient who complained of a sore throat. She had a marked cervical and slight general adenopathy. The total leucocyte count showed a high point of 29,000, 90 per cent of the cells were lymphocytes, many of which were not of

the type found in normal blood. The laboratory reported a blood picture of leukemia. The clinical diagnosis was infectious mononucleosis. Blood counts taken over a period of three weeks showed that her differential count was reversed every two or three days, and finally became normal. The blood count taken this month, one year after recovery, is perfectly normal. Apparently the reaction of the hemopoietic system of an individual is not constant even to the same infection.

Nothing constant has been found in the bacteriology of these cases. Cases of infectious mononucleosis, so-called mild acute leukemia and agranulocytic angina, have been reported which were associated with Vincent's angina. In Case II of our series the clinical picture of the throat and mouth was that of Vincent's angina, and smears contained a large number of the spirilla and fusiform bacilli. In Case III the clinical picture was not that of a Vincent's angina. There was only a small exudate on one tonsil, but smears from the teeth cavities showed a large number of Vincent's organisms. The blood picture and clinical features of Case II were those of an acute leukemia and of Case III, those of an agranulocytic angina.

As has been stated, I do not wish to draw any definite conclusions from these cases, and I have limited myself to four cases in which there seemed to be a direct connection between the infection following teeth extraction and the associated morbid states. Much discussion has taken place as to the relationship of the group of diseases called acute leukemia, aleukemic leukemia, agranulocytic angina, aplastic anemia, and infectious mononucleosis. The clinical, pathological and bacteriological findings have not been constant enough to group these diseases under one head, and yet they have many principal features in common. Whether or not they are separate clinical entities cannot be definitely determined. Further study and investigation along these lines may lead us to more definite conclusions.

The medicodental problem involved here is important. Three of our cases were operated upon by surgeon dentists in hospitals. The best known technique was observed. In two cases a complete physical and blood examination had been done previous to the extraction. That deaths resulted, particularly under such conditions, is extremely alarming. The operation for the extraction of teeth, which must be done in a notably infected field, is a serious problem, and deserves our most careful consideration.

Investigations should be carried on to determine the relationship, if any, between the opening of avenues of infection into bony tissue, particularly in view of the more recent method of chiseling away portions of the alveolar processes, and diseases whose dominant feature is a disturbance of the bone marrow. It is hoped that research will be undertaken along these lines, and that by a closer association of the physician, dentist, and laboratory investigator, we may obtain more knowledge of oral infections and their relationship to systemic disease. This may

enable us in the future to give better protection to our patients.

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### THE CAUSE OF ACUTE APPENDICITIS— THE HYDRO-MECHANICS IN ACUTE APPENDICITIS

By C. VAN ZWALENBURG \*

FROM 300 to 400 pounds of pressure to the square inch in an orange tree,<sup>1</sup> to 100 mm. hg. in an acute appendix, living nature is guilty of a great variety of hydraulic pressures, and it behooves the physician to devote more attention to their study. What do we know about hydraulic pressures in the peritoneal cavity, the stomach, the intestine, the appendix, strangulated hernia, in the chest, in the cranium and spinal cord, in cysts, bursae and joints, in various uterine conditions, in the kidneys, the bladder, the gall bladder, twisted pedicle, abscess, the eye, glaucoma, etc.?

In these schematic drawings, I have used the hydraulic equivalent of five feet for the average blood pressure (120 to 130 mm. hg.), hoping for easier and more striking visualization. The hydraulic features of an abscess are shown in figures —. No attempt is made to cover all the factors in the process. The details of the infection, toxemia, immunity, minute necrosis, hyperacidity, chemistry, and various other factors will be mentioned only as they are needed to clarify the hydraulic picture.

In this picture I am assuming the development of an abscess in the subcuticular tissues of the body. The pictures are practically the same in any part of the body, but are perhaps a little more simple here. The first step is manifestly the planting of pathogenic bacteria in the tissues. Usually this is accompanied by some traumatism, microscopic if not gross. This means the deposit of some debris at the point

\* Cornelius Van Zwalenburg (Glenwood Mission Inn, Riverside, California). M. D. University of Michigan, 1885; Honorary D. Sc., Hope College, 1925. Graduate study: Polyclinic and various clinics in United States and Europe. Previous honors: Health officer, Kalamazoo, Mich., 1890 (2 years); Health officer, Riverside Co. 1902; Kalamazoo Academy of Medicine, 1885-1900; Secretary, 1886-93; President, 1899; President, California State Medical Society, 1919; President Southern California Medical Society, Delegate to Amer. Med. Assn., 1919 and 1923, incl. Founder and Fellow of the American College of Surgeons; Councillor Calif. State Med. Society for 10 years. Present hospital connections: Surgeon, Riverside County and Riverside Community hospitals. Scientific organizations: Kalamazoo Acad. Med.; C. M. A.; A. M. A.; Riverside County Med. Soc.; Am. College of Surgeons; Southern Calif. Med. Soc.; Los Angeles Clinical and Pathological Soc. Present appointments: President Staff Riverside Community Hospital. Practice: General, special attention to Surgery. Publications: "The Role of the 'Ball Valve' in the Etiology of Appendicitis," *South. Calif. Prac.*, September, 1903; "Obturator Hernia—Double—Radical Cure by Operation," *Surg. Gynec. Obst.*, April, 1913; "Emptying a Chronically Distended Bladder," *J. A. M. A.*, December, 1920.



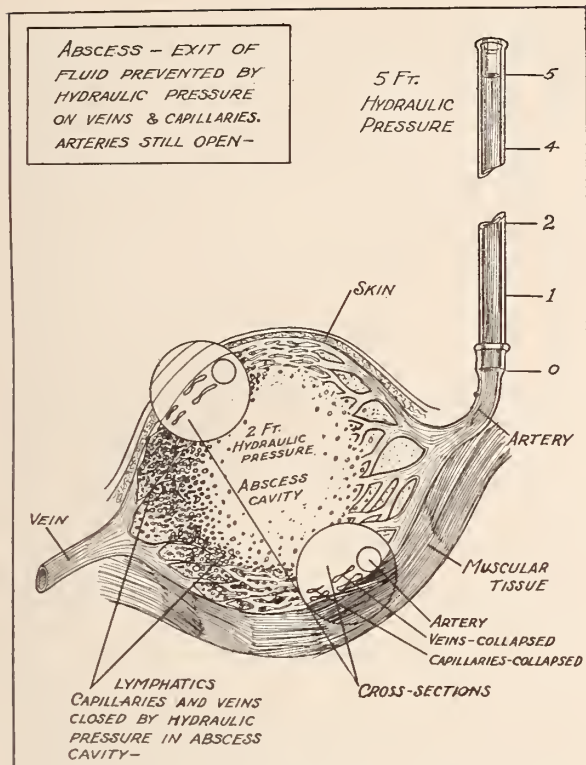


Fig. 1. Schematic Drawing—Arterial pressure, 125 mm. Mercury represented by a column of five feet hydraulic pressure. Hydraulic pressure in abscess cavity rising because this very pressure closes the veins and capillaries while the arterial pressure still forces more fluid into it.

of infection; blood clot and dead and dying tissue cells. The infection (bacterial growth) is immediately followed by the traumatism produced by the toxins of these bacteria. Suffice it to say that almost immediately there is an accumulation of debris. The presence of this debris, which is largely fluid, means pressure on the surrounding tissues. It is the effect of this pressure in which we are particularly interested in this study, and particularly its effect on the blood supply.

The blood is brought to the tissues through the arteries and arterioles, and carries a blood pressure of approximately 125 mm. hg. The fluid is removed from the tissues by the veins and lymphatics at a pressure of from 0 to 20 mm. hg.<sup>2 3</sup> Manifestly, the pressure at this point will much more readily interfere with the outgoing circulation (the veins and lymphatics, 20 mm.) than the incoming circulation (the arteries, 125 mm.). This is the crux of the hydraulic features of abscess formation. The arteries with their firmer walls and their higher pressure will continue to carry fluid (the fluid part of the blood) into this focal point (the beginning abscess). Hydraulic pressure plus osmosis forces filtration through tissues, while the lymphatics and veins will fail to carry it away. Manifestly, the pressure in this pocket will promptly rise until a certain balance is established between the efferent and the afferent streams.

A vital factor which is important in this connection is the necrosis of the blood cells, tissue cells and bacteria which takes place at varying rates, dependent upon virulence and immunity. Another fac-

tor is the thrombus formation from the bacterial toxemia, first in the veins and capillaries, and as the greater obstruction to the blood stream develops, also in the arteries. This thrombosis, together with the ischemia in the adjacent tissues produced by the hydraulic pressure in the developing abscess, are the principal causes of the necrosis. Of course, the bacterial toxemia—chemical, and other factors must not be overlooked.

Thus the abscess grows by pressure upon the blood vessels, by clot formation, by cell necrosis from the bacterial toxins and mass necrosis from the pressure on the blood vessels, plus thrombosis. This necrosis, of course, will be in the direction of least resistance, that is, in the direction of the poorest blood supply. Hence the tendency of abscesses to progress toward the surface of the body where there is poorer circulation, the source of circulation, of course, being always from the deeper parts of the body.

My principal interest in this discussion is the hydraulic pressure in the abscess itself, increasing as the incoming stream at 125 mms. delivers it and the resulting pressure on the blood vessels in the surrounding tissues because of the failure of the efferent vessels at 10 mms. to carry it away. This process you will see duplicated in our study of acute appendicitis.

It would be most interesting to study nature's efforts to overcome this obstruction in the circulation, especially capillary. It brings up the entire question of congestion. However, space is limited. I will simply say there is evidence to show that there is a much more abundant capillary network in the tissues than is evident or needed for ordinary conditions, and congestion means the opening of innumerable capillaries which are not functioning, except perhaps occasionally, in normal conditions.<sup>4</sup>

A very simple experiment which I carried out some years ago when I pulled a knuckle of intestine out of a dog's abdomen, placed a light in it and distended it by hydraulic pressure under the microscope, gives a wonderful picture of this congestion and the increased number of capillaries.<sup>5</sup>

Acute appendicitis is a strangulation like abscess formation. The initial step is the formation of a closed pouch by the lodging of a plug of fecal matter, a feco-lith or debris behind a narrowing in the lumen of the appendix. Fecal matter normally passes rather freely into and out of the appendix, as evidenced daily by those making gastro-intestinal studies by x-ray.<sup>6</sup> In many cases it is this normal inflow of feces which may lodge there and accumulate for some time before it is sufficiently massed and packed to quietly lodge behind the constriction and close it. Being a mucus pouch, there is always some secretion and soon the pouch is filled with fluid. The active peristalsis of the appendix adds its pressure. Very soon the same increase of hydraulic pressure shown in our beginning abscess is present here. It takes probably no more than 10 mm. of pressure to produce some interference with the venous and lymphatic flow in the mucosa and the submucosa. This intra-appendicular hydraulic pressure slowing and later arresting the venous and lymphatic outflow has the same inevitable result that it

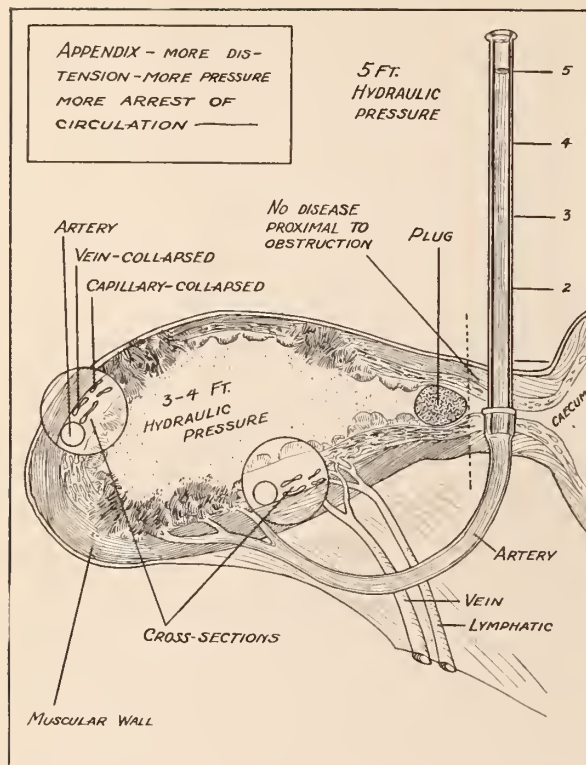


Fig. 2. Appendix cavity closed by plug behind constriction in lumen. Arterial pressure, 125 mm. represented by column of five feet hydraulic pressure. Intra-appendicular pressure rises because veins and lymphatics are closed by this intra-appendicular hydraulic pressure while arterial pressure still forces fluid into it.

has in abscess; effusion from the capillaries with consequent edema into the tissues<sup>7</sup> and into the lumen of the appendix, distending it; opening all pockets in the mucosa and allowing infection to take place.

No doubt oftentimes, especially in the fulminating type with sudden onset, there is a sudden rush of fluid from the cecum into the appendix. The fluid passes behind the plug or concretion, which acts as a ball valve. The valve closes firmly, the plug being held in the constriction by the fluid behind it under considerable tension at the very outset. This is the ball valve trap, which I described in my first paper on this subject in 1903, using as a text my experience with an acute appendix which first suggested to me this hydraulic factor in acute appendicitis.<sup>8</sup> This appendix had such a perfect ball valve that I was able with a soft rubber ear syringe to force water into it, spring the trap and it would hold the appendix distended with any amount of tension I chose to put into it.

The closure of the pouch is thus evidently largely a matter of accident though this study does suggest that a hyperactivity of the colon with or without constipation is sometimes a factor forcing the fluid contents of the colon with fecal matter into the appendix. Once the pouch is closed, tension is inevitable and we have a duplication of the hydraulic phenomenon we have just studied in abscess.

The crux of the problem lies in the hydraulic tension *inside the lumen* of the appendix. It is this pressure upon the veins and lymphatics in the mucosa, and especially upon the abundant plexus in the

submucosa, upon the firmer muscular wall, which prevents fluid escaping into the general circulation. Any fluid carried into this pouch by the arteries, either directly or by filtering through capillaries or tissues, is held within the walls of the appendix and is constantly increasing the tension therein. Early in the process the arteries in the mesoappendix, and largely in the wall of the appendix itself, are perfectly free and are carrying a hydraulic head of 100 to 200 mm. hg. as far into the appendix as possible. The stretching of the wall itself eventually arrests all circulation throughout its thickness, and a true strangulation supervenes.<sup>5 8 9</sup> The pathogenic and other germs always present in the appendix are active, doing their stuff, varying to all degrees of virulence, but actively producing infection, toxemia, and inflammation. Indeed our abscess cavity is complete; inflammation inside a cavity, a closed pouch, and pressure, pressure, pressure everywhere, and a ring of strangulated blood vessels in its walls, walls of the abscess, walls of the appendix, all the same. A true strangulation practically identical with strangulated hernia, because strangulation of hernia is due to pressure *inside* of the incarcerated knuckle of gut.

Hydraulic pressure follows the direction of least resistance? Yes! If the plug holds, which it does in probably 20 per cent of cases, hydraulic pressure will make its way through the weakest spot in the occluded part of the appendix. This will be in a general way the thinnest area in the appendix, the poorest circulation. Here necrosis will progress faster than elsewhere. But necrosis and gangrene may be general and depending largely upon the virulence of the organisms, the appendix may be gangrenous throughout the entire thickness of the walls for the entire length of the occluded portion of the appendix. In some cases the entire mucus surface may be necrotic; in others only small portions of the appendix wall may give way.

We said 20 per cent. This is, perforce, a guess only; but in probably 80 per cent of such obstructions the plug is the weakest part of the closed pouch. As the hydraulic tension in the pouch rises the plug is compressed, the constriction enlarges and the dam gives way into the colon. The tension is relieved. The blood vessels which are intact take on normal function and repair is begun on any damaged tissues. However, more or less infection has been established in the appendix and some tenderness over McBurney's point, more or less fever and a leukocytosis will run their course during the process of repair a few hours to a few days.

Manifestly, in the majority of this 80 per cent the plug will give way so early that very little reaction will follow. Sometimes it passes so quickly that in reality it can be called only an attack of appendicular colic. In other cases a considerable infection has been established and several days, even a week of abdominal tenderness follows. Of course, the plug may give way after necrosis or even gangrene has become established, though I believe this to be rare. Still, infection once established in the appendix, who can predict the end? I have removed acute appendices in which the inflammatory edema of the mucous membrane was so great that palpation



gave the impression of a distended appendix, and yet when opened the lumen was entirely empty, swept entirely clean. The thickened, inflamed, edematous mucous membrane filled the entire interior to distension. There was every evidence of distension, strangulation and virulent infection having been present a short time before. The frequent presence of slight hemorrhages into the mucosa or into the lumen of the appendix are evidence of the strangulation which marks the early steps of acute appendicitis.

#### ARGUMENT

1. You will agree from daily observation and experience that in acute abscess and in distended appendices we find a decided hydraulic tension, far greater than the few millimeters needed to stop blood flow in veins.

2. It would be most helpful if we could measure the actual tension found in these various conditions. I made some effort to have an instrument made for this purpose, but was not successful. It is enough for our purpose to know that it easily exceeds the normal pressure in the veins and stalls the circulation.

3. It must be conceded that the blood pressure (100 mms. or more) is constant in the artery.

4. When veins and lymphatics are obstructed there is bound to be effusion into the tissues and into cavities, abscess, or appendix.

5. Growing tension in the cavity (abscess or appendix) is bound to press upon the blood vessels and lymphatics in the walls, halt and eventually arrest the circulation in those walls,<sup>5</sup> causing more effusion, more distention, more interrupted circulation, a perfect vicious circle, a strangulation, until something gives way.

6. This arrested circulation from intra-appendicular hydraulic pressure is a complete explanation of the changes in the blood vessels, the hemorrhages and the various degrees of necrosis and gangrene, which from the beginning of our study of appendicitis have filled the literature with reports, pathologic findings, explanations and groupings after a plausible etiology.<sup>10 11 12 13 14</sup>

7. It puts to conclusive explanatory use the mass of discussion about embryologic irregularities, kinks, constrictions, twistings of the appendix, and fixes in a definite pathologic place the narrowed lumen, always present in every acute appendix worthy of the term acute appendicitis.<sup>10 12 13 15 16 17</sup>

8. More recent literature is full of reports and explanations and the relations to etiology of the distended or empyemic appendix (see references). Add to many of these papers the factor of hydraulic pressure and the explanation is clear. I want to commend particularly the article by Doctor Wilkie of Edinburgh.<sup>10</sup> He gives excellent descriptions of obstructed and distended appendices and was very successful in producing appendicitis in rabbits and cats, and noted the difference in the virulence of the infection in proportion to the amount of fecal matter he stripped into the appendix before he applied his obstructive ligature. Add intra-appendicular hydraulic pressure and see how clear his picture is.

9. The idea of obstruction has constantly injected

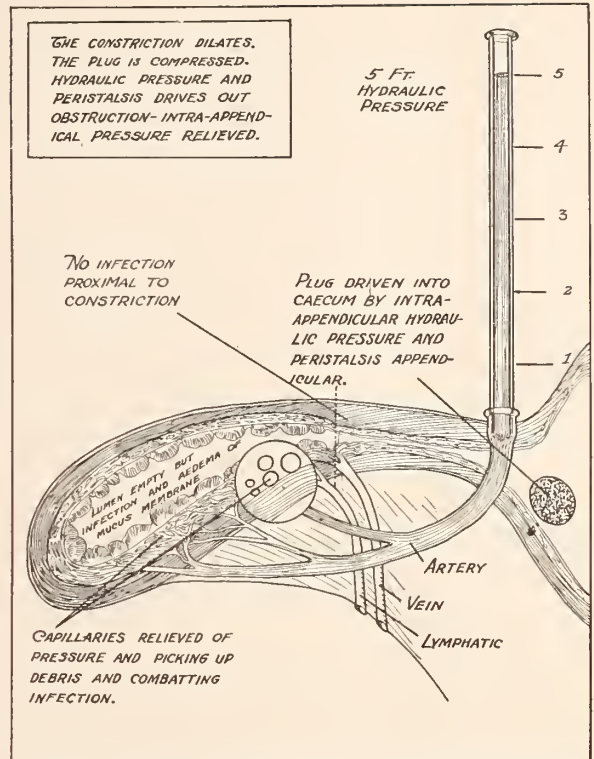


Fig. 3. Rising intra-appendicular pressure plus peristalsis forces plug through constriction. Drainage is established. Circulation is relieved and repair begun.

itself into our study of appendicitis, but our pathologists cannot see living, moving pathology, and because the *plug* has usually *disappeared* and practically always the hydraulic tension is gone they deny there ever was a plug. A concretion!! Oh, yes! He finds those occasionally. Perhaps it pressed upon a blood vessel or made an ulcer. He dare not deny that it is an etiologic factor. But his study is too much *dead* to let him go back a step and fit that concretion or plug into the constriction and allow him to reconstruct a living active picture of tragic strangulation which makes his pathology so simple that he spurns it. Here the surgeon must be the pathologist. It is living, gross pathology, and must be studied in its native habitat *before the appendix is at all disturbed*.

10. Yes! The majority of plugs will be driven into the colon before necrosis or gangrene set in. If strangulation has lasted only a few minutes (many an accurate history of such experience can be elicited by careful quizzing) the infection will be mild and confined to the mucous membrane. When the patient suffers for a few hours from spontaneous pain (colic) and then experiences a sudden giving way of pain and acute symptoms, infection involving the entire thickness of the mucous membrane and possibly more or less necrosis may be looked for.

11. How do we know that an obstruction occurs in the appendix and under a rising hydraulic pressure is driven out into the colon? How can we prove it? I know of no way. Some day someone will work out such a demonstration. Today it is the only logical explanation in the face of the conditions. The constriction we can demonstrate. You surgeons can testify to finding many appendices distended to

a considerable degree of hydraulic pressure. Those of you who are fortunate enough to operate within the first twenty-four hours of the attack will find many. Is it not just as logical to expect that a plug will be expelled from the appendix as that a cork is expelled from an air gun or a bullet from a rifle when pressure accumulates behind it? At one time I offered \$10 to the nurse who would find a plug in the stools of a patient on whom I had operated. This obstruction had disappeared in the time which elapsed between his agreement to go to the hospital for immediate operation and the time of actual removal of the appendix. The clinical and pathological pictures were complete except for the presence of the plug. At the proper time she admitted finding a lump which she described as a perfect fit, but she tried to test it by pressure and it had gone all to pieces. I did not see even the pieces.

12. If this picture of strangulation is acted upon as it is in hernia, and operation is performed inside of twelve or twenty-four hours, many distended appendices will be found. Usually it will be a simple matter to demonstrate the obstruction. By manipulation it will often be possible to displace the plug either before or after removing it from the abdomen and thus relieve the distention. In fact I have had difficulty in retaining the plug in position until the whole appendix could be removed and carefully studied. The manipulations of removal are very likely to displace it.

13. Some narrowing of some point in the lumen of the appendix is present in every case of acute appendicitis worthy to be called appendicitis. This constriction may be slight and it may be at the appendico-cecal junction and be lost in the operative procedure, but it is always there! The surgeon must find it. He may lose it while releasing kinks and twists or in pulling up or in severing the appendix from its mesentery, or it may be hidden by the ligature at the cecal junction. If he keeps in mind the problem and looks early and carefully, he will always find it. I have never failed to find it where I looked for it during the past twenty years.

14. The line of demarkation between the infected and the normal mucus surface between the infected and the normal parts of the appendix is sharply drawn *at the point of constriction* and consequent obstruction. I need show you only a few pictures to remind you of the constancy of this pathology as you remove and examine acute appendices. At a glance you recognize healthy and diseased areas with a sharp line of demarkation *at the point of constriction*. Why otherwise pathology only distal to this point?

15. The clinical picture fits perfectly with this strangulation picture. The sudden onset, often fixed to the minute (springing of the trap); often the patient is impressed that something has gone wrong mechanically. The sudden relief of pain, often after a few minutes or a few hours; no further colic, only tenderness and slight fever for a few days. In another case gradual relief from pain after twenty to thirty hours. Onset of the anesthesia of gangrene to be followed at thirty-six to forty-eight hours by acute pain recurring when the necrosis gives way and peritonitis supervenes. The constant dove-tailing



Fig. 4. Appendices showing effects of distention:

A. Constriction at cecum lost in amputation; obstruction, six hours acute catarrhal appendicitis; congested edematous; infected mucosa.

B. Appendix distended at operation eighteen hours after onset; proximal one-half inch normal; acute appendicitis; beyond sharp line of demarkation at constriction; strangulation; small hemorrhages and beginning necrosis.

C. Appendix distended at operation eighteen hours after operation; concretion at constriction; sharp line of demarkation at constriction between normal and strangulated tissue.

of these symptoms with the progress of the case and the pathologic findings at operation are often a perfect demonstration.

16. The constancy as to the time intervals in the pathologic steps are evidence of constant mechanical and hydraulic factors. The sudden onset, mechanical, the sudden let-up, mechanical, rupture in about forty-eight hours, mechanical. It varies a few hours, but in the vast majority of instances rupture of the appendix occurs within a very short time of the classical forty-eight hours, mechanical.

17. Acute appendicitis is a strangulation, a mechanical affair, and it calls for immediate mechanical treatment, surgery.

18. The way to curtail the mortality from appendicitis is to teach all men, lay as well as medical, that the etiology of appendicitis is not a matter of diet or occupation or exercise, constipation or diarrhea, la grippe, or tonsillitis, but that it depends upon the practically accidental conformation of that organ in each individual, that the acute attack means a mechanical obstruction with strangulation and that immediate removal is the royal road to the annihilation of appendix mortality.

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## ENLARGED THYROIDS IN UNIVERSITY OF CALIFORNIA WOMEN STUDENTS

STUDIES IN INCIDENCE AS RELATED TO RESIDENCE

By RUBY CUNNINGHAM \*

*An editorial adviser who evaluated Doctor Cunningham's paper for the editor says: "I feel that the paper has statistical value not only for physicians in California, but also for those seeking data on the incidence of thyroid enlargements on the Pacific Coast."*

Discussion by H. Lisser, San Francisco; E. H. Risley, Loma Linda.

**A**MONG 7320 women students entering the University of California during the last five years 1361, or 18.6 per cent, had enlargement of the thyroid gland. The percentage has varied somewhat from year to year, depending upon the enthusiasm and skill of the examiners and their judgment as to where enlargement becomes pathological.

The physical examination required of freshmen is a hurried one. Students found to have physical defects are given a reappointment card so that they may be more carefully studied at a later date. During the last few years special attention has been given to students with enlarged thyroid glands. They have been asked to fill out a questionnaire, which calls for the birth places of themselves and their mothers, their various residences, and other facts of their history not included in routine histories. Almost all students who return for a re-examination of the thyroid were seen by a group of physicians from the University of California Medical School expe-

rienced in the recognition of thyroid disturbances; frequently the diagnosis was the result of a consultation.

Five hundred students with enlarged thyroids have been carefully studied in this way. They were taken in order of their entrance to the university and unselected except for the fact that students with small thyroids due to adolescence were not all included. The enlargement in 250 of the 500 patients was due to simple goiter of the adolescent type. Seventeen were of the adolescent type with beginning colloid changes and thirty-eight were typical colloid glands. One hundred and sixty-one had adenomata. In 147 the tumor appeared in glands otherwise normal, and in fourteen in colloid glands. One hundred and forty-three adenomata seemed non-toxic and where tested the metabolic rate was normal; eighteen remaining adenomata were toxic and were responsible for metabolic rates above normal. Thirty-four had hyperplastic enlargements with symptoms of hyperthyroidism. A report of the symptomatology and physical findings in this group is in progress.

Of the 500 students thus studied, 337 were born in other countries or states and 237, or 47 per cent, spent their childhood and adolescence outside of California. This means that California is wholly or in part responsible for only slightly more than half of the enlarged thyroids on its college campus.

The known goiter areas of the United States furnished a considerable number of the out of the state students with abnormal thyroids; seventy-three had spent all of their lives in one of the states bordering on the Great Lakes and forty-one in a state of the northwest goiter area. Sixty-three had spent all of their lives in one or more of the lake states and some had migrated to western goiter areas. Thus 177, or 74 per cent, of the students coming from other states with abnormal thyroids had resided in states or countries in which the goiter incidence is high.

A westward migration of those with or who later developed enlarged thyroids is indicated by a study of the birth places of patients and their mothers and the residences of the patients in childhood and adolescence. The incidence decreases from mother's birth place to the patient's residences during adolescence in eastern states with corresponding increases in populations in western states. Some of these conclusions are supported by the following table:

WESTWARD MIGRATION OF THOSE WITH ENLARGED THYROIDS

	California	Wash., Ore., Utah, Idaho	Great Lakes States
Mother's birth place....	86	23	216
Student's birth place....	116	60	173
Childhood residence.....	205	77	148
Adolescence residence	263	63	112

Doubtless, elsewhere in the west the incidence of enlarged thyroid is increased as it is among the University of California students by westward migration.

Of 2341 students registering from California 245, or 10.5 per cent, showed thyroid enlargement. Since the state possesses a wide range of geographic, geological and climatic conditions, we may expect the

\* Ruby L. Cunningham (Berkeley). M. D. University of California, 1914; B. S., 1903 and M. S., 1912, University of California. Graduate study: Intern, San Francisco County Hospital, 1914-15. Hospital connections: University California Infirmary, 1915-26. Appointments: Assistant Professor Hygiene, and physician for women, University of California. Publications: "Scaphoid Scapula," Arch. Int. Med., 1912; "Vitamin 'A' Content of the Tubercle Bacillus," Rev. Tuberculosis, 1925.

incidence of enlarged thyroids to vary in different sections. This is confirmed by the following table:

THYROID INCIDENCE IN CALIFORNIA BY GROUPS OF COUNTIES

	Residence of recent entrants 1934	Residence of those with enlarged thyroids among the 2341	Per cent thyroids enlarged	Number with enlarged thyroids spending their lifetime in the county
Volcanic Regions:				
Siskiyou, Modoc, Lassen counties .....	18	8	44.4	7
Mountain Counties:				
Trinity, Shasta, Tehama, Plumas, Placer, Sierra Nevada, Alpine Eldorado, Amador, Calaveras, Mariposa, Tuolumne, Mono, Inyo.....	65	16	24.6	10
Coast Range Counties:				
Del Norte, Humboldt, Mendocino, Sonoma, Lake, Marin, Solano, Napa, Contra Costa, Santa Cruz, Santa Clara, Monterey, San Benito, San Luis Obispo .....	279	60	21.5	30
So. California Counties:				
Santa Barbara, Ventura, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Imperial .....	313	58	18.5	10
Valley Counties:				
Butte, Glenn, Colusa, Sutter, Yolo, Yuba, Sacramento, San Joaquin, Stanislaus, Merced, Fresno, Tulare, Kings, Kern .....	295	27	9.1	13
Bay Counties:				
San Francisco, San Mateo, Alameda .....	1372	76	5.5	22

The mountainous volcanic area in the northeast corner of the state sends few students to the university, but of this number 44.4 per cent have enlarged thyroids. Seven of the eight students with enlarged thyroids were born and brought up in the county from which they registered, so the locality may be considered intimately associated with their goiters. Goiter of adolescents, often spoken of as mountain goiter, may explain why the Sierra Nevada mountain regions of California furnished a high percentage, 24.6 among our students. Insufficient iodine intake is no doubt the chief factor in the production of mountain goiter. A high incidence of enlarged thyroids has long been noted in limestone regions, and animal experiments have shown iodine to be less effective in protecting against thyroid enlargement where associated with lime salts. The limestone belt, which runs from Mariposa County to Tehama County through the lower slopes of the Sierra Nevada, may be a factor in this moderately high incidence of enlarged thyroids, but as it occurs below the cities of gold-mining origin and above the farming belt and is sparsely settled, it can only affect a very limited number of individuals.

The Coast Range mountain counties are a close second to the counties of the high mountains with a 21.5 per cent production of enlarged thyroids. Here the limestone deposits may be a considerable factor since they are more widespread and some in well-populated areas. The elevation, which is probably associated with water supplies poor in iodine, is no doubt the chief causative factor. The popula-

tion in these counties is moderately stationary, as indicated by the fact that one-half of those with enlarged glands had spent their entire lives in one county. The counties of the great valley show a 9.1 per cent incidence of goiter among the young women who come from them to the university. Unfortunately for the accuracy of our deductions, many of these counties have mountainous parts. Some of the six patients from Butte County and some of the eight from Fresno County may have come from mountainous parts of those counties. Girls from counties which are entirely upon the floor of the valley have a very low thyroid incidence.

The fact that only ten of the fifty-eight patients with enlarged thyroids grew up in southern California may indicate that the apparent incidence of 18.5 per cent is also influenced by nonresidents from goiter zones.

About the San Francisco bay we find few enlarged thyroids—5.5 per cent. Here our figures are the most reliable because they are the largest. The rather striking differences between the percentages for San Francisco County on the coast side (10.8 per cent) and Alameda County on the inland side of the bay (3.2 per cent) are interesting, especially when we note that seventeen of the San Francisco students and only four of the east bay region students grew up in their respective counties. This may be a prediction as to the iodine content of the water supplies of the two counties.

#### DISCUSSION

H. LISSER, M. D. (384 Post Street, San Francisco)—Each new statistical study of goiter incidence, if completely performed and wisely interpreted, constitutes a valuable contribution to our knowledge of the geographical distribution of so-called endemic goiter. Doctor Cunningham's paper affords an excellent example of this sort of investigation. Such goiter surveys are an essential prelude to any intelligent and comprehensive campaign for prophylaxis.

The ordinary "simple," "adolescent," "puberty," "endemic" or "diffuse colloid goiter" is but rarely associated with any marked derangement of thyroid function; at least not for several years after its appearance; a mild hypothyroidism may accompany the goiter, but usually escapes detection, and an associated autonomic imbalance is apt to be confused with Graves' disease. But the vast rank and file of adolescent goiters cause no disturbance other than a cosmetic embarrassment, and may even add beauty to the neck by rounding out its contours. Their significance consists in their potential danger for the future. Just as syphilis may appear to slumber innocently for ten or thirty years only to create havoc in later life, so the apparently harmless goiter may persist for a similar period, becoming adenomatous the while, and toxic later on.

It is therefore interesting to note that 161 of the 500 goiters reported by Doctor Cunningham contained adenomata already, and that eighteen of these gave evidence of toxicity. It would be even more interesting to have a second report ten years from now and a third report in twenty years in the nature of a "follow-up" in order to ascertain how many of the at present "adenomatous goiters without hyperthyroidism" had changed their character into "adenomatous goiters with hyperthyroidism." And it would be equally enlightening to learn how many of the simple goiters without adenomata had developed adenomata in the next ten years. Our therapeutic advice hinges largely on such data. There is no justification in our recommending surgical extirpation of adenomatous goiters which are causing neither regional pressure symptoms nor constitutional hormonal disturbance, unless adequate and accurate statistical data prove convincingly that a large percentage of these adenomata become toxic after 40 years of age. This is the contention of the Mayo



Clinic, and the converted disease is sometimes referred to as Plummer's disease.

The practical clinical import of Doctor Cunningham's statistics lies in the recognition of three prophylactic periods: (1) the prepubescent period, with prophylactic administration of iodine in areas where goiter is endemic; (2) the adolescent age, with the prompt administration of iodine before the goiter has become adenomatous and refractory to iodine; and (3) the early adult period, with the prophylactic removal of adenomata in order to prevent subsequent damage to the myocardium and the nervous system. Widespread goiter prophylaxis on a huge scale may prove to be as brilliant a public health measure as the campaigns for the eradication of typhoid, malaria, and yellow fever.

E. H. RISLEY, M. D. (College of Medical Evangelists, Loma Linda, California)—Doctor Cunningham's paper is a most interesting and valuable contribution to our knowledge of goiter. This is especially true since it applies in a special way to the state of California. Such studies are all the more important on account of the fact that they deal with a problem which can be benefitted by prophylactic measures.

The fact that 13.6 per cent of the young women, the very flower of the flock, in one of the leading educational institutions in the state show a disturbance of this kind should be a warning to us to be in earnest about applying measures for the relief of the situation.

It is true, as Doctor Lissner says, that many of these young women will never have serious trouble, but the potentialities are there and no one can predict who the victim will be.

McClendon and others have pointed out the etiologic relation of low iodine content of food and water to the incidence of goiter, and it seems that the statistics collected in this paper tend to prove the same idea, since in California surface water is generally low in iodine and well water often rich, it would seem plausible that the different localities mentioned might vary in the frequency of goiter manifestations as the iodine content of food and water varies. It would seem that a further correlation of Doctor Cunningham's findings might be exceedingly helpful.

One of the very practical values of this paper lies in the impetus it gives to the profession to help in educating the laity in regard to nutritional problems so as to avoid the serious consequences which may follow deficiency in diet.

## THE BASIC CONCEPTS OF IMMUNITY \*

By W. H. MANWARING

(*Jour. Immunol.* 12 (3): 177-84, 1926)

An inquiry as to whether or not the three major hypotheses underlying the Ehrlich theory as to the origin and nature of antibodies are in accord with known physiological facts. The paper cites a dozen or more physiological facts drawn from blood transfusion, organ transplantation, and perfusion experiments that are inconsistent with the Ehrlich hypotheses. Many of the facts are even wholly unthinkable from the Ehrlich point of view. The conclusion is drawn that the Ehrlich theory is merely of historical interest, that it should be discarded by practical serologists and clinicians, and eliminated from elementary textbooks for medical students.

As a substitute for the Ehrlich theory, the author suggests the theory that immunological antibodies are not hypertrophied, desquamated, pre-existing protoplasmic fragments ("side-chains") as the Ehrlich theory assumes, but that they are new substances, formed as a result of interaction between injected antigens and extracellular and intracellular hydrolyzing and synthesizing enzymes, and by these enzymes specifically adapted to the antigens or to products of antigen hydrolysis. The author believes this theory is in accord with the known facts of cellular biology, and that its acceptance would stimulate the hope that in time therapeutic antibodies, possibly even superior to those formed in the animal body, may be successfully synthesized in the chemical laboratory.

\* Presidential Address, American Association Immunologists, Albany, New York, April 1, 1926.

## MODERN MANAGEMENT OF EXOPHTHALMIC GOITER †

(*From the Division of Surgery, Mayo Clinic, Rochester, Minnesota*)

By JOHN DEJ. PEMBERTON \*

EXOPHTHALMIC goiter was first described as an entity in 1825 by Parry, who published an account of eight cases. Later, Graves in 1835, and von Basedow in 1840 described the clinical findings. Curiously, not until the eighties was it accidentally discovered by several surgeons, Tillaux, Rehn, and Mikulicz, that the disease could be cured by operation on the thyroid gland. Since then surgery has made stupendous strides, holding an increasingly dominant rôle in the treatment of this malady, although history bears ample testimony that the path of progress of surgical treatment of the thyroid has been difficult and beset with many obstacles.

While the cause of exophthalmic goiter is not known, and is in all probability not thyrotoxic, there is consistently a characteristic pathologic picture of diffuse, parenchymatous hypertrophy and hyperplasia in the thyroid gland, and, moreover, the successful resection of the gland is invariably followed by immediate remission of symptoms. All evidence points to the fact that the gland is delivering to the body an excessive amount of secretion, probably altered or perverted in character. As no substance has been found which will neutralize or counteract the action of the secretion in the tissues, practically all successful methods of treatment have aimed to diminish the activity of the gland by interference with its blood, lymph or nerve supply, or by partial destruction of the gland by resection, injections, or irradiation. As the preservation of a functioning portion of the thyroid gland is necessary for the maintenance of health, the important desideratum in any method employed should be reduction of hyperactivity without loss of function.

It was soon recognized that surgery offered means of removing excessive thyroid tissue, and at the same time insured the preservation of sufficient tissue for the maintenance of health. However, in the pioneer days surgical resection of the gland was attended by an almost prohibitive mortality and morbidity. A mortality of 25 per cent or even higher was not uncommon, and obstructive dyspnea, tetany, and myxedema were frequent postoperative sequelae. Many factors were responsible for these results, chiefly the faulty operative technique and lack of knowledge of the natural course of the disease. Frequently patients died even after an uncomplicated operative procedure, the result of crisis. It is not surprising therefore that with such a discouraging mortality only a few men ventured to develop this field of surgery. However, the very striking and obvious improvement in the patient's condition fol-

† Read before the California Medical Association in General Session, Oakland, 1926.

\* John DeJ. Pemberton (Mayo Clinic, Rochester, Minnesota). M. D. University of Pennsylvania, 1911; B. A. Univ. of North Carolina, 1907; M. S. in Surgery Univ. of Minnesota, 1918. The practice limited to Surgery. Publications: Fifteen articles dealing with goiter.

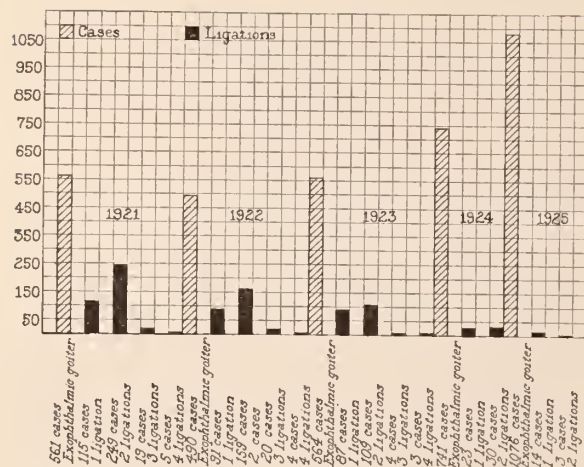


Fig. 1.—Yearly cases and yearly ligations. The use of iodine was begun in March, 1922.

lowing successful operation spurred the pioneers to carry on. The development, and finally the standardization of the operative technique resulted from the efforts of a relatively few men, chiefly Mikulicz, Billroth, Kocher, Halstead, C. H. Mayo, and Crile.

The fact that the thyroid gland could be successfully resected in the large majority of cases, without danger of technical error, was a great impetus to the surgical treatment of goiter in general, but it did not completely solve the problem confronting the surgical treatment of exophthalmic goiter. In this there were hazards incident to the disease greater than those of faulty operative technique, that is, the acute postoperative hyperthyroid crisis and the debility of the patient.

The most baffling and discouraging problem in the management of exophthalmic goiter was the frequent occurrence of postoperative hyperthyroid crisis. Often within a few hours after the goiter had been successfully resected the patient would develop an acute reaction, with extreme tachycardia, high fever, nausea and vomiting, restlessness, mental stimulation, and delirium, which frequently terminated in coma and death within twelve to twenty-four hours. Necropsy would reveal no anatomic cause for death. As a rule the more toxic the patient's condition the more likely the development of a severe reaction, but there were no absolute criteria of the patient's condition by which the postoperative reaction could be foretold, for not infrequently it occurred when the condition was apparently but mildly toxic. No measure proved effectual in checking the progress of the reaction. Fortunately it was early recognized that hope lay in prevention, and efforts were directed at means of reducing the intensity of the hyperthyroidism and of affording protection to the patient. Thus, it was learned that during certain phases, when the degree of hyperthyroidism was greatest, the substitution of minor surgical procedures, such as ligation, at a diminished hazard, might so improve the condition of the patient that the thyroid gland could be resected later without the risk of an acute reaction. For the same purpose the operation might be divided into many stages. Other means advocated for the rehabilitation of the patient included the application of roentgen rays and radium to the thyroid and thymus glands, injection into the

thyroid gland of boiling water and various drugs, such as carbolic acid and iodine, and the employment of general measures of rest, high-caloric diet and forced fluids. Likewise there were developed numerous refinements in surgical management, comprising chiefly the avoidance of prolonged general anesthesia and the use of special types of anesthetics, the preoperative administration of sedatives, such as morphine and scopolamine, and the performance of the operation in bed, all designed for the protection of the patient. In the earlier days a great many patients with exophthalmic goiter did not present themselves for surgical treatment until late in the course of the disease, after the development of visceral degeneration, when the operative risk was high and the prospect for cure diminished. This was an important factor in retarding the progress of the surgical management of exophthalmic goiter. There were three chief reasons why patients did not submit to operation until they had tried other methods of treatment without success. The first reason was the relatively high mortality and morbidity, and the second, the rather high percentage of relapses due to the incompleteness of the operative procedure (lobectomy). During this period the generally accepted operation for exophthalmic goiter was resection or extirpation of one lateral lobe of the gland, tissue in the remaining lobe equivalent to several times the normal being thereby preserved. That there should have been a persistence of hyperthyroidism at a reduced level in such patients was not surprising. All the patients received great immediate benefit from the procedure, and, curiously, in many it was permanent, while in others complete remission was followed by relapse, sometimes six or eight years afterward. The third reason why patients were late in having surgical treatment was because of the tendency toward spontaneous remission of symptoms and cure of the disease. For any disease of unknown origin, the natural course of which fluctuates and at times results in symptomatic recovery, it is to be expected that there should be developed many systems of treatment, each vouchsafed as specific; and so it has been in the management of exophthalmic goiter. To enumerate only a few, there have been the rest cure, treatment with specific serums or specific drugs, irradiation, injections, osteopathy, and various therapies, as organotherapy, electrotherapy, and hydrotherapy. But the tendency toward spontaneous cure and remission in exophthalmic goiter is not constant, for in many patients (probably more than 60 per cent) the course of the disease is even, usually mild and uninterrupted by waves of exacerbation. The disease may begin in a remittent form and continue in a chronic. It is obvious, therefore, that any treatment not founded on at least a partially rational basis cannot survive.

With the improvement of the surgical management of exophthalmic goiter patients began to seek operation before the disease had wrought permanent damage. Thus one of the additional operative hazards was partially removed by the patients themselves.

The reduction of the operative mortality to the low rate of from 2 to 4 per cent was a noteworthy achievement which served to establish firmly the



surgical treatment of exophthalmic goiter. However, it was recognized that on account of the failure to eliminate the hyperthyroidism completely, and because of the obvious objections to the multiple-stage operation, the treatment still left much to be desired. Further improvement was impossible without the close co-operation of the internist, the laboratory worker, and the surgeon.

In the Mayo Clinic in March, 1922, Plummer instituted the administration of compound tincture of iodine (Lugol's solution) to patients with exophthalmic goiter under preparation for surgical treatment. Previous to this the general conception of the nature of the hyperthyroidism in exophthalmic goiter was that the body tissues were saturated with iodine elaborated by the thyroid gland. Hyperthyroidism and hyperoidism were spoken of synonymously, and so the administration of iodine to patients with exophthalmic goiter had seemed definitely contraindicated.

The action of iodine in a case of exophthalmic goiter is not definitely known, but the following is supposed to be the basis: The syndrome of adenomatous goiter with hyperthyroidism is the result of an excessive amount of thyroxine in the tissues, and can be produced experimentally in myxedematous patients by feeding them excessive amounts of thyroid extract or thyroxine. In short, adenomatous goiter with hyperthyroidism is pure hyperthyroidism. In exophthalmic goiter there is the same syndrome with certain additional characteristic symptoms, such as exophthalmos, nervous and gastrointestinal phenomena, and a tendency toward spontaneous crisis. The cause of exophthalmic goiter is not known. Plummer suggests that intensive stimulation of unknown source, acting on the entire gland, drives it to the point of producing an active agent, abnormal in quality as well as quantity, which causes all the phenomena of the disease in the tissues of the body. As the normal molecule of thyroxine, discovered in 1914 by Kendall, contains 65 per cent by weight of iodine, it was natural to speculate as to the possibility of an incompletely iodized molecule, and Plummer conceived the theory that the syndrome of exophthalmic goiter varies with the total amount of a completely iodized molecule, and with the relative amount of the two molecules in the tissues. The expectation, therefore, was that if iodine were given in amounts sufficient to iodize completely all the thyroxine in a patient with exophthalmic goiter, those symptoms peculiar to the disease would disappear or diminish in intensity; and as the occurrence of postoperative hyperthyroid reactions was known to be confined to patients in whom these characteristic symptoms were most marked, their elimination seemed certain.

Actually, the employment of iodine more than fulfilled all reasonable hopes. Surprisingly quick after its administration to a patient with exophthalmic goiter, there is to be noted a very definite change in symptoms. Usually the first difference is noted by the patient in the loss of nervous tension with ability to relax and sleep; there is a loss of the "stare" of the eyes, although not usually accompanied by any appreciable lessening of the exophthalmos. Nausea, vomiting and diarrhea, if present, often disappear within from twelve to twenty-four hours. Following the improvement in appetite there

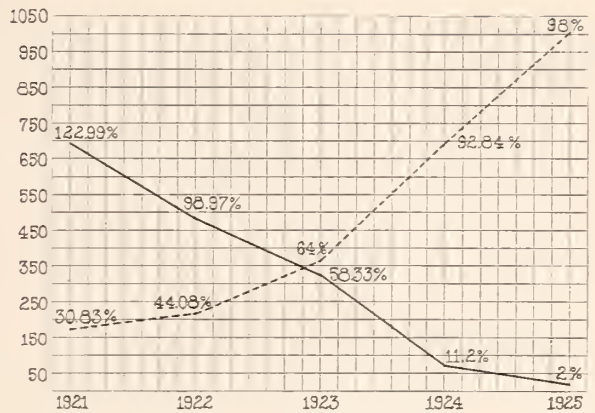


Fig. 2.—Increase in percentages and numbers of primary thyroidectomies (broken line) and decrease in percentages and numbers of ligations (solid line).

is a gain in weight and strength, and within from five to seven days the pulse rate and basal metabolic rate drop, often from thirty to forty points each. The more toxic the patient's condition, the more striking is the improvement. Patients with mild symptoms, and those with moderate or relatively high hyperthyroidism with a hard "trained" goiter, usually of long duration, appear to improve only slightly from the administration of iodine. Boothby found that after the initial improvement, due to iodine, the patient's condition becomes stable and no further improvement occurs. I have since been able to confirm this by observation of many patients who took iodine continuously for a year or more, so there is no rational basis for administering iodine in cases of exophthalmic goiter with the expectation of curing the disease.

The preoperative administration of iodine to patients with exophthalmic goiter for a period of ten days or longer has a constant effect on the thyroid gland. According to Broders the histologic changes are diffuse and characterized chiefly by marked dilatation of the follicles, a change in the lining epithelium from columnar to cuboidal or even to flat cells, and an increased deposit and thinning of the colloid material. Grossly this is manifested by a change from the meaty, friable, and extremely vascular type of goiter to one approaching the diffuse colloid goiter. From a surgical consideration the benefit from iodine is not confined to the reduction of the activity of the gland, as the technical procedure is made easier by it.

#### PREOPERATIVE PREPARATION

Except as to the fundamental principles involved, there can be no standardization of the preoperative preparation of patients with exophthalmic goiter; the method must be adapted to the individual patient. Obviously, the more toxic the patient's condition the greater the care and time needed for preparation. Three measures are essential for all patients: iodine, rest, and a high-caloric diet. The patients with milder symptoms are given Lugol's solution, 10 minims three times a day for from five to seven days, and are not necessarily placed in the hospital. All others are in the hospital for from five days to one month or longer, depending on the condition, but they are not kept in bed continuously unless absolute rest is clearly indicated. In all in-

stances the patient should be allowed to be up and around for several days before the operation. Lugol's solution is given in the same dosage three or four times a day. To patients admitted to the clinic in a crisis a larger amount of Lugol's solution is given, sometimes 60 to 100 minims daily, until the crisis has subsided, then 10 minims three times daily until operation. The administration of digitalis as a routine preoperative measure is contraindicated; it is indicated only in the exceptional instance, for the patient with cardiac decompensation when compensation is not restored by rest. Digitalis should be stopped at least three days before operation. While I am not capable of discussing the effect of digitalis in cases of toxic goiter, I can assert positively that operative results decidedly improved after the routine use of digitalis was discontinued. Other measures are employed only as they may be definitely indicated.

#### PROPER TIME FOR OPERATION

There can be no rules to regulate the time for operation; experience must dictate. However, certain considerations are fundamental. For patients who are classified as bad risks preparatory measures should be continued as long as there is definite improvement. There are two additional operative hazards in patients with exophthalmic goiter: a postoperative crisis if the patient's condition is acutely toxic and the postoperative development of pulmonary infection if the patient is greatly debilitated. These two possibilities should always be borne in mind in deciding the time to operate. As already indicated, the disappearance or marked diminution of the symptoms characteristic of exophthalmic goiter (nervous tension, restlessness, mental stimulation or depression, nausea, "stare," and so forth) is a reliable index that there will be no serious hyperthyroid reaction, provided there are no technical complications. General debility must not be overlooked. The patient who has recently passed through a crisis should not be subjected to thyroidectomy until he has at least partially regained his strength. This may require a month or longer. Improvement may be hastened and made more certain if both superior thyroid poles are first ligated. However, the indications for this procedure have been reduced remarkably since the introduction of iodine (Figs. 1 and 2).

Before advising ligation and permitting the patient to pass from direct observation one should keep in mind the fact that in every case during the course of the disease there may be one time most favorable for partial thyroidectomy, and that if this is allowed to pass by, surgical treatment may be fraught with greater hazard. The operative risk in children with exophthalmic goiter is relatively greater than in adults, and I have often found it advisable to prolong their preparatory treatment to two or three months.

#### THE OPERATIVE PROCEDURE

I shall not discuss in detail the operative technique for exophthalmic goiter, but I shall mention briefly three points which I consider of importance to the success of surgical treatment of goiter in general. The first point is the establishment of the patient's

confidence. To cloak in mystery any part of the proposed management would only instill fear and doubt in the patient's mind. Therefore, his confidence is best gained by frankly outlining to him the plan of management, and by permitting him to mingle with other patients who have already had their operations, and are enthusiastic over the result. The second point is anesthesia. Local anesthesia is to be preferred if the co-operation of the patient can be secured. When general anesthesia also is necessary, the type used (nitrous oxid, ethylene, ether) is of little consequence. The experience of the anesthetist is of far greater importance. The aim in all instances should be to avoid prolonged deep anesthesia. The third point is technical complications. The most frequent technical complications in the surgical management of goiter are injury to the recurrent laryngeal nerve and postoperative hemorrhage. The occurrence of either may result in death of the patient. To avoid them requires meticulous care in technical details.

#### POSTOPERATIVE TREATMENT

The early postoperative care of the patient should, for the most part, be symptomatic. Lugol's solution is given as a routine measure. To the patient who was a bad risk it is administered in large doses, 40 to 60 minims, in the belief that it may influence the postoperative reaction. Absolute dependence should not be placed on the heavy postoperative administration alone, or the death of the patient may result. Postoperative administration is necessary in addition to the preoperative administration; it is not a substitute. Lugol's solution in doses of 10 minims a day is prescribed for from two to three months following the operation.

#### MORTALITY

In the Mayo Clinic from January, 1924, to January, 1926, partial thyroidectomy was performed in 1835 cases of exophthalmic goiter, with eighteen deaths, a mortality of 0.98 per cent. It is evident that under this plan of treatment the operative mortality for partial thyroidectomy has been reduced to a nominal figure, so that today the patient with exophthalmic goiter is running a greater risk by postponing surgical treatment than in submitting to it.

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So long as religion, convention and society insist that we treat our instincts, and particularly the genic instinct, not only as the chief source of sin, but as something to be ashamed of instead of looking upon it as a fountain of love, light and life and our noblest and most godlike possession, we are going to have nervous and mental diseases, for the exciting cause of most of them is repressing, or improperly and indiscreetly indulging that instinct. —Joseph Collins, *Dearborn Independent*.

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The best method to attack problems in the borderline subjects is by co-operation between two types of trained investigators. In the case of biochemistry, for example, by the provision of trained students of two kinds, the one trained in physiology but with a sufficient knowledge of organic chemistry to promote sympathy with and knowledge of the chemist's point of view, and the other trained as an organic chemist with a similar knowledge of the methods and requirements of the physiologist.—J. F. Thorpe, *Science*, September 3, 1926.



## THE VALUE OF DARKFIELD MICROSCOPY IN THE DIFFERENTIAL DIAGNOSIS OF SECONDARY SYPHILIS

By H. J. TEMPLETON \*

THE great value of doing darkfield examinations for the spirocheta pallida on all genital lesions, regardless of their appearance, has been frequently emphasized and is now generally recognized. The darkfield microscope is also very valuable in demonstrating the spirochetes in the lesions of secondary syphilis. That such lesions contain the spirocheta pallida, and that they can generally be easily found, are facts which have long been known but which have not been applied frequently enough in actual practice.

It often becomes necessary to differentiate secondary syphilis from some benign dermatosis which resembles it. In most instances this can be done on clinical grounds, but a few cases occur where the differentiation is rather difficult, especially to those who have not had special training in this field of medicine. The macular syphilid, for instance, may very closely resemble the eruption produced by certain drugs such as belladonna and the balsamics. It may also be confused with pityriasis rosea. Another syphiloderm very closely resembles psoriasis at times. Another type so simulates smallpox as to be called the "varioliiform" syphilid. We also have the "acneiform" syphilid, the "lichenoid" syphilid, the "impetigoform," the "ecthymaform" syphilid, each of which may closely resemble the dermatosis from which it is named. Now if we are confronted with the necessity of deciding whether or not a given lesion is a secondary syphiloderm and find diagnosis difficult or impossible upon purely clinical grounds, we should have recourse to examination with the darkfield microscope.

The lesions under question should be cleansed and abraded until serum exudes. Careful and repeated examinations will disclose the spirocheta pallida in those lesions which are syphilitic. Positive findings are absolute proof of syphilis and, likewise, negative findings carefully arrived at speak very strongly in favor of the benign nature of the process.

This procedure is far less open to error than darkfield examinations done on suspicious lesions on the genitals or in the mouth. For in these localities harmless spirochetes normally exist which might be confused with the spirocheta pallida. But such is not true of lesions of the skin where other spirochetes (except the *s. pertenuis* of yaws) do not occur even as contaminators.

The Wassermann reaction is sometimes resorted to when the diagnosis is in doubt, but although it is valuable in deciding whether or not the patient

is syphilitic, it may not be of value in deciding whether or not the lesion under observation is syphilitic. For a patient may have a positive Wassermann, due to an old syphilis, and still develop any one of the many dermatoses.

If specific antisyphilitic therapy has been applied this method becomes less valuable, as even one injection of arsphenamin will destroy most of the organisms. I have not used this method in the differential diagnosis of late recurrent secondaries, but it probably would be of less value in such eruptions, for they are reactions of a sensitized skin to but a few spirochetes and do not contain nearly as many as the lesions of the early secondary period.

### EXAMPLES

CASE 1—Mr. R. S., age 32, was brought to me by a urologist because of a macular eruption on his forehead, chest, and back. Suspicious intercourse admitted. Chancres were denied, and no evidence of any could be found. There were no lesions on the mucous membranes, nor was adenopathy present. The eruption might have been regarded as either a macular syphilid or as a toxic erythema from drugs. This latter diagnosis was especially to be thought of because the patient had begun taking cathartic pills containing belladonna prior to the onset of the rash. A lesion on the forehead was examined with the darkfield microscope and many spirocheta pallida were found. The Wassermann was later found to be strongly positive. The eruption rapidly vanished with the use of neoarsphenamin. Diagnosis: Macular syphilid.

CASE 2—A. L., age 40, presented an acute generalized eruption of split pea to fingernail-sized papules covered with a rather dirty gray scale. His forehead showed dull red papules following the hair line in a manner very suggestive of the "corona veneris" seen in the papular syphilodermas. In spite of a positive Wassermann, a diagnosis of psoriasis was made on the appearance of the lesions. This diagnosis was questioned. Therefore, serum from one of the papules on the abdomen was examined. No spirochetes were found. The later development of typical psoriatic patches on the elbows substantiated the darkfield's negative findings. Diagnosis: Psoriasis.

CASE 3—An eruption was diagnosed as a papular syphilid by a urologist. A physician with considerable experience in syphilology disagreed with this diagnosis. The patient was referred to me for a dermatologic opinion. My diagnosis was syphilis, but to definitely settle the argument a darkfield examination was done. Many spirocheta pallida were found in serum from a papule on the chest. Diagnosis: Papular syphilid.

### CONCLUSION

Spirocheta pallida occur in the cutaneous lesions of secondary syphilis, and can be demonstrated by the darkfield microscope. This constitutes a valuable, accurate and fairly easy method of differentiating the secondary syphiloderms from the various dermatoses which resemble them.

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The only fine feature of national statistics is their flexibility. If I am an Anti-Saloon Leaguer, I can get the exact figures on how much prohibition has saved the nation. If I am a Saloon Leaguer, I can get equally accurate figures on how much prohibition has cost the nation. I have before me a bulletin which seeks to prove that we are not spending too much for public education. It compares the national wealth of 1922—which is only a guess—with the income of 1919 and the cost of education in 1922. The resulting chart looks as though it ought to mean something. Actually it means nothing at all, for the figures are not comparable. By the same method I could estimate the cost of King Tut's funeral, compare the result with what Henry VIII spent for wives, reduce the whole to 1913 dollars, and prove that after all it wouldn't cost much to run an automobile in 1930.—Samuel Crowther, Dearborn Independent.

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\* H. J. Templeton (3115 Webster Street, Oakland, California). M. D. Ohio State University, 1917. Graduate study: Intern Denver County Hospital, 1919-20; graduate School of Medicine, University of Pennsylvania, 1924-25; graduate study, Stanford University School of Medicine, 1925-26; M. Sc. (Med.) University of Pennsylvania, 1926. Appointments: Dermatologist, University of California Infirmary, Berkeley; instructor in dermatology, Stanford University; dermatologist, Alameda Health Center, San Francisco; several papers in Arch. Derm. and Syph. and Calif. and West. Med. Practice limited to Dermatology and Syphilology.

## THE MEDICAL CORPS OF THE NAVY— WHAT IT OFFERS THE MEDICAL MAN

By J. GREGG SMITH\*

*Lieutenant Medical Corps, U. S. Navy*

THE Medical Corps of the United States Navy as a career offers a constantly increasing appeal to qualified medical men. In the navy the medical officer has many opportunities for travel in congenial company with an assured position. He has ample work to keep him busy, with numerous opportunities for scientific work. At the same time he has time for relaxation, pleasure and sports that in civilian life can only be enjoyed by the exceptionally well-to-do. At all naval ports clubs with golf and other attractions are open to him at a nominal fee.

Following appointment, medical officers are usually ordered to the naval hospital nearest his home. There he remains until ordered to report to the Naval Medical School at Washington, D. C., to pursue a course of instruction designed to fit him for the special duties required by the naval service.

The course in this school consists of lectures and practical laboratory work in tropical medicine, surgery, ophthalmology, otology, clinical chemistry, medical diagnosis, cardiovascular diseases, medical department duties, preventive medicine, naval hygiene, epidemiology, sanitation, pathology, medical zoology, physiotherapy, bacteriology, serology, hematology, basal metabolism, gas warfare, aviation medicine, genito-urinary diseases, roentgenology, clinical neurology, and psychiatry.

Upon completion of the course the members of the class are ordered to sea duty. For several years the navy has been accepting qualified senior medical students of Class "A" Medical School as interns. These and other medical officers who have entered the service without adequate postgraduate hospital service are ordered to a large naval hospital where they serve a year before going to sea. These naval hospitals are located near large cities such as Boston, New York, Philadelphia, Norfolk, San Diego, San Francisco, and Seattle.

The internship is rotating and consists of approximately five months medical, five months surgical, and two months laboratory duties. These hospitals have affiliations with lying-in hospitals where short courses in obstetrics and gynecology may be had. Since the adoption of the practice of appointing select graduates as assistant surgeons and assigning

them to naval hospitals for a year's intern service a teaching service has been developed at the larger hospitals. The heads of the various departments are specialists. Professional survey by the hospitalization committee of the American College of Surgeons reports that the naval hospitals visited by them has been found to far exceed the minimum requirements for internship.

Sea duty is quite diversified, from small ships that may take one to the Mediterranean, Central and South America, China, and Japan (the Asiatic Fleet consists of more than forty naval vessels), or he may have duty on board a battleship, a vessel carrying from 1200 to 1600 men. These have spacious wards with all conveniences for treatment of injuries or diseases to be found in a hospital on shore. An isolation ward for communicable diseases; a fully equipped operating room, a dispensary, a dressing and examining room completely equipped for dressing surgical cases and performing minor surgical procedures, a well-equipped clinical laboratory and a medical store room sufficient for the needs of a long cruise.

A medical officer's first sea cruise usually lasts from two and a half to three years. On coming ashore he usually finds himself due for promotion with consequent increase in pay and allowances, and receives assignment to one of the various shore establishments among which may be mentioned navy hospitals, navy yards, training stations, torpedo stations, hospital corps schools, Navy Medical School, recruiting stations, naval dispensaries, aviation fields, the various marine bases and barracks.

The naval hospitals are located at Portsmouth, N. H., Boston, Mass., Newport, R. I., New York, N. Y., Philadelphia, Pa., Washington, D. C., Norfolk, Va., Charleston, S. C., Pensacola, Fla., San Diego, Calif., Mare Island, Calif., Bremerton, Wash. (near Seattle, Wash.), Honolulu, T. H., Yokohama, Japan, Cavite, P. I. These hospitals are large and compare favorably with the best civilian hospitals anywhere in the United States. The hospital staff usually consists of from twenty to thirty medical officers, including well-trained specialists in internal medicine, surgery, ear, eyes and throat, urology, roentgenology, and psychiatry. Weekly conferences are held at all hospitals, at which interesting cases are presented and papers read. Often leading civilian specialists are secured to read papers and present cases at these meetings.

During the past six years, through the courtesy of the Mayo foundations, at least nineteen of our physicians have been sent to Rochester, Minnesota, for periods of observation and study varying from three to six months. During the same time at various other institutions more than two hundred officers have taken postgraduate courses in internal medicine, roentgenology, eye, ear, nose and throat diseases, urology, psychiatry, and even obstetrics and pediatrics. During the year 1925, 68 medical officers, 13 dental officers, 14 nurses, and 114 hospital corps men have been given special courses at various institutions in the United States. Eighty medical officers were authorized to receive special postgraduate instruction during 1926. I might also mention

\* J. Gregg Smith, Lieutenant (M. C. U. S. N. (U. S. Navy Retg. Sta., Salt Lake City). M. D. Medical College of Virginia, 1915. Graduate study: Undergraduate internship Retreat for Sick, Richmond, Va., 1914-15; Intern U. S. P. H. Hospital, Boston, Mass., 1915; house physician Boston Lying-In Hospital, 1916; course of instruction Army Chemical Warfare School, Edgewood Arsenal, Maryland. Previous honors: Active duty U. S. N. Med. Corps, U. S. N. R. F., May, 1917, to June, 1919; sea duty, July, 1917, to November, 1918; duty with marines, November, 1918, to June, 1919; private practice till November, 1921; general practice, including general surgery; entered regular Navy, November 14, 1921, at which time was vice-president of county and district medical societies; served as "Major in the Policia Nacional Dominicana" for two years while serving with marines in Santo Domingo. Scientific organizations: A. M. A. Present appointments: Passed assistant surgeon Medical Corps, U. S. Navy. Practice: General, especially interest in Urology since 1912. Publications: "Amebia and Bacillary Dysentery," Review of Recent Literature," Naval Medical Bulletin, 1923.



that during the war about thirty medical officers were given training at the Rockefeller Institute.

Although the naval medical officer's day is usually crowded with official activities his day ends at 4 or 4:30 p. m., and he is able to enjoy evenings and Sundays with his family or friends. There is always time for recreation or the pursuance of a hobby. Often the opportunity for boating, hunting, and fishing such as only the very wealthy may enjoy. Golf, tennis, and baseball may be played in every port. Every ship and station has its motion pictures and other amusements. In addition opportunities for specialization and keeping abreast of the times are at least equal to that enjoyed by the average city physician.

The Naval Reserve is a component part of the United States Navy, and acceptance of membership in the reserve represents mainly an agreement to serve as a commissioned medical officer in the navy in time of war or during a national emergency so declared by the President.

Although members are thus obligated to serve in time of war, and may then be separated from the service only as provided for by the same laws and regulations as apply to officers of the regular navy, in time of peace, on the contrary, an officer may be ordered to active duty or training only with his own consent, he may resign within the discretion of the Secretary of the Navy, and he may not be discharged except for cause. Should an officer, in the course of the physical examination which is required every four years, be found physically disqualified for service he may be honorably discharged or placed on an honorary retired list.

Officers are commissioned in the reserve by the President to serve during his pleasure in the same grades and ranks as do the officers of the regular navy, appointments and promotions being made pursuant to law and in accordance with regulations prescribed by the Secretary of the Navy.

Officers of the reserve of the same rank take precedence among themselves by date of commission. In time of peace they take precedence with but after officers of the regular navy of the same rank. When mobilized in time of war or national emergency, officers of and above the rank of Lieutenant Commander take precedence with all other officers according to the dates of their respective commissions. When performing active duty or its equivalent, or while wearing a naval uniform, officers of the reserve are subject to the laws, regulations, and orders for the government of the navy.

A candidate for appointment as medical officer must apply by letter to the commandant of the naval district in which he is a resident, requesting permission to be examined for appointment in the grade of Assistant Surgeon, rank of Lieutenant Junior Grade, United States Volunteer Naval Reserve. No professional examination is required of a candidate for appointment. His professional qualifications being established by letters and certificates submitted with his application. Letters testifying to his moral character, habits, citizenship, preliminary education, medical education, society membership,

and a license to practice medicine must also accompany his application.

The information here given has necessarily been very brief, so for the benefit of those interested in either the Naval Reserve or the Regular Navy, I might add that I am located at the Navy Recruiting Station in Salt Lake City, and will at all times be glad to give any information on the subject.

## CHRONIC ARTHRITIS: ITS TREATMENT WITH EMETIN †

By LEONARD W. ELY \*

(From the Orthopedic Division, Stanford Medical School)

THE form of arthritis considered most likely to respond to the emetin treatment is that which I have repeatedly discussed as the second great type—osteoarthritis, hypertrophic arthritis, arthritis deformans, degenerative arthritis, etc., as it is generally known. This form of arthritis was formerly attributed to trauma or to bacterial agents, and is still attributed to them by many. I have been unable to accept this conclusion because the study of my specimens convinces me of its inadequacy. The areas of aseptic necrosis in the bone, and the reaction of the marrow about them, indicate the presence of some living organism, the changes one would expect from the protozoa. This hypothesis was supported by the almost invariable accompaniment of infection of the bone at the roots of the teeth. While the tooth is of no direct importance, so-called root disease keeps the door open for the other infectious agent.

I acknowledge that the hypothesis that the ameba causes chronic arthritis has not been proved. Kofoed's reported discovery of ameba histolytica in the bone marrow of one of my specimens has never been confirmed, and satisfactory experimental proof on animals is still lacking.

The percentage of positive finds of protozoa in the stools of my patients with second type arthritis is fairly high, as shown in previous reports. Parasites have been found in the stools of several patients with first type arthritis. Two or three patients with apparently incurable progressive arthritis were cured by antiprotozoal treatment.

My method of handling second type cases is as follows: Every patient is investigated for the presence of alveolar infection. If it is present it is treated. Routine search of five or six stools is being conducted meanwhile. If protozoa be found, the patient gets the full antiparasitic treatment; if not, the neosarsphenamin is omitted.

The full treatment is a course of emetin hydro-

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\* Leonard W. Ely (Stanford University Hospital, San Francisco). M. D. Columbia University, 1895; A. B. Columbia, 1889. Graduate study: Metropolitan Hospital, New York; one year in Vienna. Previous honors: Consulting Orthopedic Surgeon, Roosevelt and Metropolitan hospitals; Surgeon Sea Breeze Hospital, New York. Present hospital connections: Stanford University and Lane hospitals. Scientific organizations: San Francisco County Medical Society, California Medical Association, American Medical Association. Present appointments: Professor of Surgery (Orthopedic), Stanford University. Practice limited to Orthopedic Surgery since 1908. Publications: "Joint Tuberculosis," New York; "Bone and Joint Studies," Stanford Hospital; "Inflammation in Bones and Joints," Philadelphia; articles on bones and joints (50-100 in number) in various medical journals.

chloride, interspersed with three doses of neoarsphenamin, and followed by a course of emetin bismuth iodide. Usually twelve daily injections of 1 grain of the emetin hydrochloride are given, followed by 3 grains of emetin bismuth iodide daily for ten days. The neoarsphenamin is given weekly, beginning with a dose of .45 grammes. The second dose is .6 grammes, third .9 in men, .6 in women. All patients are examined before the treatment by physicians in the medical clinic, and I take this opportunity to acknowledge my indebtedness for their co-operation. For reasons to be presently mentioned the period of emetin bismuth iodide has been reduced to six days. During the treatment the patient is kept on a careful diet, and takes no cathartics. The emetin hydrochloride is usually given intravenously, though recently the plan of giving the first dose of half a grain intramuscularly has been adopted. One patient, an elderly and rather feeble man, had an

attack of syncope after the first intravenous dose of 1 grain. This was our only early accident.

As to the effects of emetin:

The healthy adult, especially the male adult, usually has been able to take the full course without apparent harmful effects of the drug. The treatment was administered for about two years without a serious accident. Then one patient, an elderly woman, suffered from a fibrillating heart for several weeks before her death. The necropsy showed arteriosclerosis and myocarditis. At her examination immediately before her treatment her blood pressure was 175/90. She had been a patient at the Stanford clinics for various troubles for some years, and there seemed no contraindication to emetin. Several years previously she had had hypertension and "intestinal intoxication," the latter probably due to an ameba coli infection. She had taken 11.5 grains of emetin hydrochloride—3.5 grains intramuscularly, 8 grains intravenously—and two injections of neoarsphenamin.

Case	Sex	Age	Diagnosis	Parasites	Complications	Treatment	Result
1	M.	51	Type II spine	Am. coli	Alveo. infect.	Emetin Neoarsphen.	Improvement
2	M.	30	Type II spine	None	Alveo. infect.	Emetin	Improvement
3	M.	56	Type II spine and hips	None	Edentulous	Emetin Neoarsphen.	Improvement
4	F.	59	Type II spine	None	Alveo. infect.	Emetin	Improvement
5	M.	55	Type II spine	None	Teeth (?)	Emetin	
6	F.	50	Type II spine	Butchlii	Edentulous	Emetin Neoarsphen.	Treatment discontinued on account of heart and digestive symptoms
7	F.	52	Type II knee	None	Edentulous	Emetin	Extreme muscular weakness followed treatment. Joint improved
8	M.	63	Type II spine	None	Edentulous	Emetin	Marked improvement
9	M.	63	Multiple type II	Iod. Butsch.	Alveo. infect.	Emetin	Treatment not completed
10	M.	59	Type II shoulder	None	Alveo. infect.	Emetin	
11	F.	38	Type II knee	None	No alveo. infect.	Emetin	Improved
12	F.	52	Multiple type II	Am. coli	Alveo. infect.	Emetin Neoarsphen.	Improvement, but great muscular weakness followed treatment
13	M.	38	Type II spine	Am. coli	No alveo. infect.	Emetin	Moderate muscular weakness followed
14	M.	74	Type II spine	Am. coli	Prostatitis Teeth (?)	Neoarsphen. Emetin	No improvement
15	F.	40	Type II knee	None	Alveo. infect.	Neoarsphen.	
16	M.	60	Type II knee	Am. Coli	Alveo. infect.	Emetin Neoarsphen.	Emetin b. i. was not tolerated
17	F.	55	Type II spine	Am. hist.	Alveo. infect.	Emetin	No improvement
18	M.	49	Type II hip	None	Alveo. infect.	Emetin	Treatment discontinued on account of heart symptoms
19	F.	64	Type II knee	Am. coli Lutschlii Histolyt. Am. coli	Edentulous	Emetin Neoarsphen.	Marked improvement
20	M.	62	Type II Mult.	Am. coli	Alveo. infect.	Emetin	Improved, but weak after treatment
21	M.	43	Type II Mult.	Am. coli	Teeth (?)	Neoarsphen. Emetin	No improvement
22	F.	50	Type II spine	Am. coli	Previous alveo. infect.	Neoarsphen. Emetin	All symptoms disappeared
23	F.	36	Type II spine	None	Previous alveo. infect.	Neoarsphen. Emetin	
24	M.	43	Type II spine	None	Alveo. infect.	Emetin	No improvement
25	M.	53	Type II spine	None	Alveo. infect.	Emetin	Improvement
26	M.	44	Type II spine	None	Alveo. infect.	Emetin	Marked improvement.
27	F.	50	Type II spine	Giardia	Alveo. infect.	Neoarsphen.	"Much improved"
28	M.	47	Type II spine	None	Edentulous	Emetin	No improvement
29	F.	55	Type II spine	Am. coli	Edentulous	Emetin	Improved. Treatment discontinued on account of dyspnoea.
30	F.	61	Type II hands	Am. coli	Edentulous Carcinoma of breast	Emetin	
31	M.	60	Type II knee	Am. hyst.	Alveo. infect.	Emetin Neoarsphen.	Improved
32	F.	60	Type II spine	Am. coli	Edentulous	Emetin	No improvement. Extreme muscular weakness following.
33	F.	60	Type II knee	Am. coli	Previous alveo. infect.	Emetin Neoarsphen.	Pain disappeared, but much muscular weakness followed
34	M.	63	Type II Mult.	Chilomastix	Edentulous Prostatitis	Emetin	No improvement
35	F.	65	Type II foot	None	Alveo. infect.	Emetin	Great muscular weakness
36	F.	52	Type II knee	None	Edentulous	Emetin	Weakness; improved.
37	M.	60	Type (?) spine	None	Alveo. infect.	Emetin	
38	F.	51	Type II hip	None	Alveo. infect.	Emetin	
39	F.	39	Type II spine	Am. coli	Alveo. infect. Bartholinitis	Emetin	Did not have teeth extracted. Not improved.
40	M.	41	Type II Mult.	Am. coli	Alveo. infect.	Emetin Neoarsphen.	Marked improvement
41	F.	48	Type II Mult.	None	Alveo. infect. Previous carcinoma of the breast	Emetin Neoarsphen.	Improvement
42	F.	40	Type II spine	None	Alveo. infect.	Emetin	No improvement. Did not finish treatment. Five injections only



Case	Sex	Age	Diagnosis	Parasites	Complications	Treatment	Result
43	F.	45	Type II knee	None	Alveo. infect.	Emetin	Improvement. Muscular weakness followed treatment
44	M.	25	Type II spine	Am. coli.	Alveo. infect.	Emetin	Treatment not completed
45	F.	49	Type II spine	End. nana	Alveo. infect.	Emetin Neoarsphen.	
46	F.	60	Type II shoulder	Am. coli	Edentulous	Emetin Neoarsphen.	Improvement
47	F.	74	Type II knee	Am. coli	Edentulous	Emetin	Extreme muscular weakness followed treatment
48	F.	57	Type II knee	Am. coli	Edentulous	Emetin Neoarsphen.	Improvement. Muscular weakness followed treatment
49	F.	43	Type II knee	None	Alveo. infect.	Emetin	
50	F.	46	Type II Mult.	Am. coli	Alveo. infect.	Emetin	Marked improvement
51	M.	53	Type II Mult.	End. nana Giardia. Chilomastix	Edentulous Migraine	Neoarsphen. Emetin Neoarsphen.	Improvement. Migraine also improved. Marked cardiac reaction to emetin
52	M.	56	Type II spine	None	Previous alveo. infect. Infectious antrum	Emetin	Emetin intermittently act. falling blood pressure. Functional cure
53	M.	55	Type II spine	Am. coli Endol. nana	Infectious antrum Edentulous	Emetin Neoarsphen.	Em. bis. iod. discontinued on account of low blood pressure. Slight improvement
54	M.	51		Am. coli	Alveo. infect.	Emetin	
55	F.	36	Type I Mult.	Am. histolytica?	Edentulous, ischio-rectal abscess	Neoarsphen. Emetin Neoarsphen.	
56	M.	48	Type I Mult.	None	Alveo. infect.	Emetin 1 neoarsphen.	Improved
57	F.	40	Type I Mult.	None	Alveo. infect.	Emetin	
58	F.	51	Type II Mult.	None	Alveo. infect.	Emetin	
59	M.	50	Type I knee	None	No alveo. infect.	Neoarsphen. Emetin	
60	M.	64	Type II feet	None	Alveo. infect. Intermittent claudication	Emetin	Treatment discontinued on account of weak heart. Improvement
61	F.	49	Type II knee	None	Alveo. infect.	Emetin	No improvement. Symptoms probably due to intermittent claudication
62	F.	55	Type II knees	None	Edentulous	Emetin	No improvement. Would not have teeth extracted
63	F.	53	Type (?) foot	Am. coli	Alveo. infect.	Emetin Neoarsphen.	Treatment discontinued on account of rapid pulse, and muscular weakness
64	F.	26	Type I Mult.	None	Edentulous	Emetin Neoarsphen.	Improvement
65	M.	68	Type II feet	Am. coli, Iod. Butsch.	Edentulous Hallux valgus	Emetin Neoarsphen.	Marked improvement. This was one of the cases usually considered hopeless
66	M.	26	Type II Mult.	Am. coli	Alveo. infect. Inf. tonsils	Emetin Neoarsphen.	Improved. Patient also had other treatment
67	F.	60	Type II Mult.	Am. coli	Alveo. infect.	Emetin Neoarsphen.	Death (cardiac)
68	F.	68	Type I Mult.	None	Edentulous	Emetin Testicular extract Neoarsphen. Tonsillectomy	
69	F.	63	Type I Mult.	Am. coli	Edentulous	Emetin Neoarsphen.	Improvement. Tonsillectomy
70	F.	12	Type I hips	Chilomastix Giardia Trichomonas Histolytica	No alveo. infect.	Tonsillectomy Emetin Neoarsphen.	Recovery. Return of symptoms after two years; hystolytica found
71	F.	59	Type II Mult.	Am. histolytica	Alveo. infect.	Emetin	Marked improvement
72	M.	43	Type II Mult.	None	No alveo. infect.	Emetin Neoarsphen.	No improvement
73	F.	59	Type II spine	Am. coli	Alveo. infect.	Emetin Neoarsphen.	No improvement. Would not have teeth extracted
74	F.		Type II spine		Alveo. infect.	Emetin Neoarsphen.	Slightly improved. Treatment discontinued on account of muscular weakness
75	F.	34	Type I Mult.	Am. histolytica	Alveo. infect.	Emetin Neoarsphen. Thyroid	Cure. An apparently hopeless case
76	F.	65	Type II knee	None	Alveo. infect.	Emetin Neoarsphen.	No improvement. Treatment could not be carried out continuously on account of marked muscular weakness
77	M.	50	Type II spine	Am. coli	Alveo. infect.	Emetin Neoarsphen.	Marked improvement
78	F.	35	Type II spine	?	Alveo. infect.	Emetin Neoarsphen.	Cure. (Symptomatically)
79	M.	38	Type I Mult.	Giardia Lambliia Am. coli	Alveo. infect.	Emetin Neoarsphen.	Treatment stopped on account of jaundice, vomiting, fever, rapid pulse, etc.
80	M.	40	Spine type ?	Am. coli	Alveo. infect.	Emetin Neoarsphen.	
81	F.	50	Type II Mult.	Am. butsch.	Alveo. infect.	Emetin Neoarsphen.	Treatment stopped on account of diarrhea and muscular weakness
82	M.	60	Type II spine	None	No alveo. infect.	Emetin	Slightly improved
83	F.	37	Type (?) Mult.	None	Previous alveo. infection, hypothyroidism	Emetin	No improvement
84	M.	69	Type I Mult.	None	Edentulous	Emetin Thyroid extract Thymus extract	Marked improvement
85	F.	40	Type I Mult.	Am. butsch. Giardia	Alveo. infect., gc. infection	Emetin Neoarsphen.	No improvement
86	M.	64	Type II sternoclavicular	None	Edentulous	Emetin	Improvement

min. At the end of this course, lasting about two weeks, she started with emetin bismuth iodide, taking 3 grains each day at 2 a. m. After five days she was reported to be weak and nauseated, and the dose of emetin was cut down to 1 grain. After a few days the emetin was discontinued, and the patient entered the hospital with an intermittent pulse. She died eighteen days later, thirty-six days after the administration of emetin was begun.

After this fatality the daily practice of taking the patient's pulse and blood pressure during the emetin treatment was instituted, and of having an electrocardiogram before treatment was begun. There is a frequent fall in the blood pressure, and a frequent rise in the pulse rate. Either one is an indication to discontinue the emetin, temporarily at least. Dr. J. K. Lewis of the medical clinic and Dr. T. R. Haig of my clinic have this work in charge, and should be able to report some interesting results.

Some patients complain of temporary nausea immediately after the emetin is administered, and in several patients, mostly women, nausea and diarrhea have necessitated the discontinuance of the treatment.

The most frequent symptom following emetin, or coincident with its administration is the marked muscular weakness, which occurs most often during the time the patient is taking pills of emetin bismuth iodide. Sometimes the patient complains bitterly of this weakness, and although at first not inclined to pay much attention to it, I now consider it is important enough to cause the immediate discontinuance of the drug. Sometimes the weakness lasts for weeks after treatment is finished.

As to the effects of this treatment on the intestinal parasites, it is hard to speak positively. In a reasonable proportion of the patients followed up and re-examined, but not in all, the parasites had disappeared. I have lost all confidence in the efficacy of emetin in giardia infections, and now rely instead on three doses of neosarsphenamin at two-day intervals. With this treatment both successes and failures must be acknowledged. However, my primary interest is the efficacy of the treatment, not on the amebiasis, but on the arthritis.

Results on the arthritis side of the problem are shown in the synopsis. A considerable proportion of the patients cannot be located, and the results in them are consequently unknown. The symptoms of one patient evidently came from his intermittent claudication, and naturally did not yield to emetin. The anatomic changes in a second type arthritis are permanent. No treatment will ever restore the normal cartilage and bone, but if the symptoms disappear the treatment is worth while.

I have seen a patient with a severe second type arthritis of the hip, apparently doomed to resection, lose his pain, and go back to work, after the treatment here outlined, and after he had been told that the disease was too far advanced to expect help.

I have records of a number of patients with multi-articular involvement of the apparently hopeless variety who have been cured or markedly helped, and these are the patients who have tried everything others could offer. On the other hand, several pa-

tients of this kind derived no benefit whatever from the treatment.

The ordinary first type arthritis apparently has nothing to do with amebiasis. It is bacterial in its origin. There is a form of progressive multiarticular first type involvement, however, the kind which usually attacks young women, the American "arthritis deformans," which I believe to be caused by intestinal parasites, and assume that the inflammation is in the synovial membrane, and that the bone, not being attacked, does not react in the characteristic manner. When I see a patient afflicted with this disease recover, I must believe either that I am witnessing a miracle, or that the parasiticide drugs have cured. In the old days these patients did not recover. They slowly became worse, bedridden, and died after a longer or shorter time. There was no such thing as spontaneous recovery. Many of my second type patients are improved, some are symptomatically cured, some are not improved at all.

#### CONCLUSION

1. Emetin is a dangerous drug, affecting the heart, intestine, and muscles.
2. When cautiously and intelligently employed emetin has a distinct value in the treatment of chronic arthritis.
3. After an experience of almost two and a half years I shall continue to employ emetin in selected cases of arthritis.

#### SPECIMEN CASES

Mrs. H. T. E., 34 years of age, housewife. Chronic multiple first type arthritis.

This patient came to me from Doctor Heller of the Pueblo Medical Group. The case had been worked up thoroughly by Doctor Heller, who had also treated her most intelligently with the standard means. She had had from him and others diverse and thorough treatment, and had also gone the usual rounds of osteopaths and baths. The patient brought with her an excellent history showing that no pains had been spared in the matter of scientific investigation. The only things that I could discover in addition were that her thyroid was slightly enlarged, that she had two dead teeth, and that her stools contained amebae histolyticae. She received the full treatment with emetin hydrochloride, emetin bismuth iodide, and neosarsphenamin. She complained of weakness after about six doses of emetin hydrochloride, and the treatment was stopped for three days. At the end of the treatment her stools were negative, but she still had considerable pain. The joints looked better than at first. After about three weeks of thyroid extract and heliotherapy the joints were much better, but were still somewhat sensitive. I then gave the patient another course of parasiticide treatment. At the end of this she departed for her home apparently completely cured.

Mr. C. A. E., 41 years of age, pipe-fitter. Multiple, chronic second type arthritis. Duration of disease eighteen years, starting in the left foot and then involving the wrists, fingers, the ankles, toes, the neck, and the knees. This patient had been treated in many places, including some of the large clinics in the East. The only significant findings we made in his case were the presence of one dead and two abscessed teeth, and the presence of amebae coli in his stool. He received the usual treatment of twelve intravenous injections of 1 grain emetin hydrochloride, interspersed with neosarsphenamin, and followed with 3-grain doses of emetin bismuth iodide for ten days. At the end of the treatment the patient was enthusiastic about the result. The x-ray pictures in this patient's case showed very extensive damage to the joints. Both this patient and the preceding one were apparently hopeless cases.

To see a friend steadily and to see him whole is no little achievement. Ernest Sutherland Bates, Saturday Review.



## ANALYSIS OF SURVEY ON DIABETES IN CHILDREN

By FRANCIS SCOTT SMYTH \*

*The prognosis of juvenile diabetes before the introduction of insulin was invariably fatal. Since the advent of insulin the outlook is far more hopeful, and certain patients have shown some recovery of tolerance. The treatment should include the optimum caloric and protein intake and a safe fat-carbohydrate ratio. Vitamins should be emphasized, cod liver oil, green vegetables, and heliotherapy are advocated. Insulin should be given in sufficient amount to keep the blood sugar approximately normal even to the risk of occasional hypoglycemia. All foci of infection should be removed. All children with doubtful symptoms should have a glucose tolerance test, elimination of foci of infection, and should be kept under observation for an indefinite period as is done with congenital luetics.*

DISCUSSION by Horace Gray, Santa Barbara; William W. Belford, San Diego.

LITERATURE about juvenile diabetes is scant. This is partly the result of inaccurate methods of diagnosis and partly the disinterest due to the fatal prognosis invariably found before insulin was available. Such patients as were seen or reported before the use of insulin usually showed a pitiful picture of malnutrition and dwarfism.

This study of diabetic patients from the University of California and Children's hospitals is a review of the possible factors responsible for diabetes, contrasting the prognosis under modern treatment with that found in the preinsulin period. Thirty-one patients are listed under the diagnosis of diabetes, of which nineteen were true diabetics. In the remaining twelve the diagnoses are questionable and they are included as border-line cases, three of whom had symptoms of diabetes insipidus. Inasmuch as the symptomatology of all the border-line cases was very similar to that of the true diabetic onset, and since the early diagnosis of diabetes is most essential, the border-line cases represent a very important class for preventive work and follow-up.

**Review of Cases**—Of the 19 unquestionable diabetics 5 were females and 14 males, which very closely approximates the generally recognized sex proportion of 3.1. The oldest patient was 13 years, the youngest 2 years, four being under 4 years of age. Five gave a positive family history of diabetes. The remaining fourteen had no such history, though of course, the accuracy with which a history was obtained was variable and in no instance was an adequate history of events subsequent to diagnosis obtained. Of the 5 with positive family histories only 1, a sister, was of the patient's generation; 3 of the 5 were in males and 2 in females. These familial histories are of interest in view of the proportion Hansen has reported in his recent article

on the rôle of heredity in diabetes and which is in contrast to the findings of Knox, who claims in his report on diabetes in infancy that heredity plays but little part.

In addition to the family history the following possible predisposing causes were obtained from the patients' records: two cases of congenital developmental failure, one had obvious glandular dystrophy and the other cleft palate, which is simply taken as a possible indication of other maldevelopments. Three patients showed previous dietary disorders, two of excessive carbohydrate and one of prolonged difficult feeding. The rôle of acute infections, discussed in detail below, is indicated by the following figures: upper respiratory infections (tonsils) 7, influenza attacks 2, exanthemata 23, measles 9, parotitis 4, varicella 4, pertussis 4, scarlet fever 1, diphtheria 1, gastrointestinal upset 4, frequently accompanied by severe abdominal pain of possible significance in involvement of the pancreas.

Primary symptoms varied with the adequacy of parental observations. For example, it would be supposed that polydipsia would precede emaciation as the first symptom. However, 4 showed polydipsia as the first symptom, 5 fatigue, 3 polyuria, enuresis or nocturia, 3 loss of weight or emaciation, 1 complained of itching skin and in 1 glycosuria was accidentally discovered unpreceded by observed symptoms, in 2 no record was made of primary symptoms. The fully developed symptomatology included polyphagia, polydipsia, polyuria, and loss of weight in all but three patients, in whom polyphagia was not found; these were all under 7 years of age, two males and three females.

**Focal Infections**—A striking finding was the presence in sixteen of chronic foci of infection, tonsils 12, teeth 4, sinuses 2, middle ear (otitis media) 2, skin 2, mastoid 1, vaginitis (nonspecific) 1, not reported 3. Attempts at removal of the foci of infections were made in five. It is reasonable to assume that infection materially handicaps the recovery of autogenous tolerance and that the prognosis is infinitely improved by removing the foci.

The treatment of the nineteen patients was so varied that except for the advent of insulin a summary would be too detailed. Follow-up records show that 8 are dead, 10 alive, and 1 patient was not located. Of the patients who died five had never received insulin. The one not found was in the preinsulin period and is assumed to have shared in the 100 per cent mortality of the five patients treated before insulin was available. Of the three deaths which occurred subsequent to the use of insulin one died in coma after 10 units of insulin had been given for a 10-year-old child with a .5 blood sugar. In another patient the parents refused to allow insulin after discharge from the hospital and the child died in coma at home. The third patient was allowed frequent dietary indiscretions by the parents and also received insulin irregularly; death in coma occurred at home.

The highest blood sugar recorded on entry was .760, lowest .228; highest CO<sub>2</sub> on entry 36.8, lowest 15.2.

**Border-Line Cases**—Of the twelve border-line cases there were nine males and three females, which

\* Francis Scott Smyth (206 Judah Street, San Francisco). M. D. University of California, 1922; A. B. University of California, 1917; M. A. 1921. Graduate study: Boston Children's Hospital, 1922-23; N. Y. Nursery and Child Hospital, 1923-24; St. Louis Children's Hospital, 1924-25. Previous honors: Fellow at Hooper Research Foundation, 1919-20. Hospital connections: Executive Officer Dept. Pediatrics, Univ. of California. Scientific organizations: San Francisco County Medical Association; California Medical Association. Appointments: Asst. Professor of Pediatrics, University of California. Publications: (F. S. Smyth & G. H. Whipple) "Metabolism of Bile Acids," Jour. Biol. Chem., Vol. 59; (F. S. Smyth & W. P. Lucas) "Blood Studies in Newborn," Amer. Jour. Dis. Children, Vol. 22.

again agrees with the generally accepted findings. The oldest patient in this group was 14 years and the youngest 14 months. There was a family history of diabetes in three females and three males; one in the fourth generation, four in the third generation, and one in the preceding generation. Of predisposing causes other than heredity there were four with congenital developmental failure of whom three had obvious glandular dystrophy and one had mental deficiency. Acute infections were as follows: upper respiratory 4, influenza 1, pneumonia 1, gastrointestinal upsets 2, measles 4, scarlet fever 1, pertussis 3, and diphtheria 1.

**Primary symptoms:** Eight had polyuria, 2 polydipsia, 1 fatigue, and in 1 glycosuria was accidentally discovered. **Entire symptoms:** 1 developed polyphagia, polyuria and polydipsia, and 3 had glycosuria; loss of weight was fairly common.

**Focal infections** included chronic diseased tonsils 6, dental caries 3, sinus infection 1, and not recorded 2.

**The Follow-Up**—Two of the twelve under observation became definitely diabetic, one had a diabetic syndrome associated with glandular dystrophy, two had a definite glandular dystrophy unassociated with complete diabetic symptoms, two are still under observation, two have made apparent recovery, and three have not been heard from.

**Laboratory Findings**—Blood sugars on entry were all within normal limits. A glucose tolerance test was done in eight, four were diabetic in character and two of these later became the true diabetics, two are still under observation but the glucose tolerance has as yet not been repeated, three were atypical tests but not diabetic in character (two of these became definitely glandular troubles, one a glandular dystrophy with diabetic symptoms), and one was normal. In one of the patients (L. H.) in whom diabetes was later diagnosed a tonsillectomy was done, and it is interesting to note the improvement in the glucose tolerance test subsequent to tonsillectomy, but before the final diagnosis of diabetes was made.

**Discussion**—The factors responsible for diabetes are not definite, but certain influences probably contribute to its production. The well-known racial predisposition to the disease in Hebrews decreases in American and European Caucasians, and is seen less frequently in the colored races. Certain definite familial tendencies are seen, but this does not follow the Mendelian laws of inheritance in any clear-cut manner (Hansen, *Ungek. f. Laeger.* 86:341-44, 1924). Faulty diet has been frequently suggested as being etiologically important in diabetes. Modern civilization, with its ever increasing consumption of concentrated carbohydrate foodstuffs, might be held accountable for the increasing incidence of the disease. A long-continued overbalanced carbohydrate diet may materially affect the tolerance of carbohydrates, and two of our diabetics gave such a history. Many diabetic patients show a definite relation to acute infections. This is well illustrated in the cases reported by Stengel (*Contributions to Med. and Biol. Research*, dedicated to Sir William Osler, 2:1186, 1919) in which the diabetic syndrome appeared and disappeared with recurring in-

fections. Some patients give a history of infection preceding the symptoms of diabetes, though as a rule the damage from the infection is so severe as not to be relieved when the infection disappears. Reasoning from the reaction of diabetics to infections incurred subsequent to the onset of the disease we are at once confronted with the strikingly deleterious influence of infection on pancreatic function. The peculiar finding of Holsti (*Ztschr. f. Klin. Med.*, 20:272, 1892) in which influenza preceded the onset of diabetes in many of the patients studied, and the findings of Schloss (personal communication) of disturbed carbohydrate metabolism in influenzal infection might indicate some specificity with regard to its influence on the pancreas. Profound ketosis is encountered with seemingly light influenzal infections of the upper respiratory tract. Of the acute exanthemata, mumps has perhaps been most often found in association with pancreatic upset. Garrod (*Lancet*, 1:557, 1912) has reported twenty-two cases of mumps with diabetic symptoms, and Patrick (*British M. J.*, 2:802, 1924) has also reported acute diabetes following mumps. However, diabetics are seen in whom none of the above mentioned influences operate.

We are more or less forced to assume that there may be individuals in whom diabetes represents a failure of development of pancreatic tissue somewhat analogous to thyroid subdevelopment. Pathological studies substantiate this in some cases, but in many we are unable to correlate the pathological picture with the clinical dysfunction. Osler (*Modern Medicine*) reported persistent glycosuria in a newborn. The well-known association of diabetes with internal gland disorders is again indicative of congenital maldevelopment. Inasmuch as we frequently find congenital anomalies together, we are not surprised at the findings of at least one such congenital defect in our series. Poynton and other English writers have also noted the occurrence of diabetes with celiac disease, which also probably represents a congenital developmental failure. In the presence of such a congenital pancreatic failure a seemingly slight infection might bring the latent diabetic symptoms to their threshold.

In infants and young children diabetes is often ushered in with an acute gastrointestinal upset. Vomiting and diarrhea may be characteristic, and the abdominal cramp-like pains may be of significance with regard to pancreatic involvement. With the subsidence of the gastrointestinal symptoms, increased thirst and polyuria may persist, and if the significance is not quickly recognized, may lead to a rapid and fatal termination. Unlike adults a failing appetite may be associated with diabetes in younger children, and parents are prone to ascribe emaciation, which is a common finding in this disease, to the failing appetite rather than its true cause. The skin becomes very dry and occasionally xanthoma may be found. In children polyuria is perhaps the first symptom noticed by the parent, who may have been attracted to the condition by bed wetting or enuresis. In one case which came under my observation the parent first noticed the crystalline appearance of the dried urine around the toilet. In general, however, after 7 years of age



the diabetic child's full symptoms are similar to those of the adult.

#### DIAGNOSIS

In the presence of the classical symptoms, polyuria, polyphagia and polydipsia with marked loss of weight, the persistent reduction of Benedict's solution by the urine is sufficient to assure the diagnosis. However, since the classical symptoms may be lacking in infants and young children, and since the prognosis depends so largely on an early recognition of the disease, an effort should be made to rule it out whenever there is the slightest suspicion of diabetes. This is possible through the newer methods of laboratory diagnosis. Glycosuria itself is not sufficient evidence for a diagnosis, as this may appear in a variety of other conditions, for example, alimentary glycosuria, pentosuria, renalglycosuria, concentrated urine, anhydremia, chronic nephritis, and cachexia. A single blood-sugar estimation is likewise insufficient evidence for a diagnosis, though perhaps it is of more value than ordinary urinary tests since there may be a high renal threshold. The accurate diagnosis of diabetes rests on the glucose tolerance test by which these other disturbances may be ruled out. Blood-sugar estimations are of value in the control of insulin therapy. With the development of diabetic acidosis, further analyses are of value. The carbon dioxide content of the plasma gives an index of the degree of acidosis far more accurately than the qualitative test for ketonuria.

#### TREATMENT

Before the advent of insulin the outlook for infants and children with diabetes was almost hopeless. Through properly administered insulin and a regulated diet the prognosis has been greatly improved. Certain aspects of the treatment differ from that in the adult. In children we have growing organisms with a greater caloric requirement and a growth requirement which must be met with sufficient food. They may be capricious in their appetites and devoid of an appreciation of the nature of their ailments. A treatment which does not permit as normal a development as possible is not wholly successful. Since the introduction of insulin the prolonged starvation treatment has not been necessary and more nearly normal development is therefore possible. A diet must be obtained which is sufficient as to calories and nitrogen content, palatable and safely balanced in antiketogenic ratio, and it must be remembered that this latter is subject to individual variations (Levine and Wilson, *Am. J. Dis. Child.*, 31:323, 1926). With such a diet sufficient insulin must be used to keep the blood sugar within normal limits.

The initial insulin dosage is reckoned from the blood-sugar content. The body fluid will approximate two-thirds of the body weight. The excess sugar over the normal content can then be ascertained and insulin given to metabolize this. As a rule the excess blood sugar if metabolized by sufficient insulin will take care of the acidosis present. In extreme acidosis, however, additional therapy may be required. Where there is marked dehydration and anuria a hypodermoclysis of saline should

be followed by the intravenous administration of a glucose solution. Joslin has criticized the use of intravenous glucose, but its function in this instance is not so much for its antiketogenic action as for the more rapid absorption of the necessary fluid and a very prompt stimulus to diuresis. Another disputed therapeutic measure is the use of sodium bicarbonate. In acidosis when the  $\text{CO}_2$  content of the blood is reduced the administration of sodium bicarbonate will raise it. In the average patient with only a moderately reduced  $\text{CO}_2$ , insulin alone is sufficient to metabolize excess ketone acids and raise the  $\text{CO}_2$ , in which case administration of sodium bicarbonate would merely confuse the picture. Where, however, the  $\text{CO}_2$  is less than 15 volumes per cent, there may be an actual depletion of the base in the blood, and sodium bicarbonate administration would then be indicated.

The diet is based on the ideal weight, the caloric requirements and nitrogen need for weight and age. From the nitrogen (protein intake) the minimum carbohydrate necessary to prevent ketosis may be reckoned from Shaffer's formula, although we have found that patients may show an individual variation in the ketogenic ratio. Palatability often demands a slightly greater amount of carbohydrate than the calculated minimum, since the diet must be made agreeable for the patient. The fat content of the diet is fairly high but safe, and gives very satisfactory results. The vitamin content of the diet is emphasized. Cod liver oil and greens are essentials. In infants special formulas with reduced sugar, curds, etc., must be used. Continued treatment and favorable prognosis demand strict adherence to the diet and analysis of each individual specimen of urine. While in the hospital blood sugars are obtained from time to time by which the renal threshold is approximately estimated, and though this is subject to variation it is of value in the further treatment of the patient.

In infants insulin shock must be carefully guarded against. Drowsiness or marked perspiration are perhaps the most common early findings. If orange juice is not promptly administered they may develop convulsions or coma. In older children the subjective symptoms may be indicative of the imminence of a hypoglycemia, but one should be on the lookout for malingering. Nevertheless, if possible, the blood sugar should be kept low, even running the risk of hypoglycemia if the maximum regeneration of the pancreas is to be expected. Ulrich (*J. A. M. A.*, 83:1914-1915, 1924) even recommends hypoglycemia as allowing the maximum regeneration. Any foci of infection such as the teeth, tonsils, and sinuses should be properly treated, and invariably the response in tolerance justifies these measures. The occurrence of a high per cent of upper respiratory infections has been shown in this study, and those patients who had the foci removed showed a distinct increase in carbohydrate tolerance. While in the hospital, Alpine lamp treatments are advisable, and sun baths are advocated on discharge.

#### PROGNOSIS

The prognosis of diabetes in children treated with insulin is yet to be written. So far the results have

been very encouraging. The previous starvation and low calorie diet treatments were invariably accompanied by malnutrition and poor development. Allen still adheres to his "undernutrition" treatment since the advent of insulin. I feel that although the Allen treatment was an improvement over methods previously in vogue, undernutrition *per se* is not an asset but a hazard. Overweight is not advocated, but the child should be approximately at its ideal weight. With adequate diet and insulin they approximate normal development. Infections and major operations may be tolerated without extreme danger.

With regard to their recovery of carbohydrate tolerance certain features are important. The earlier the treatment is started the better the chances of recovery of tolerance. Acutely ill patients promptly treated usually show a more rapid recovery than those of longer duration. The elimination of foci of infection materially improves tolerance. Finally, a strict adherence to diet, sufficient insulin to keep the urine sugar-free and the blood sugar normal undoubtedly offers a better chance for the organism to repair the damaged tissue. There is considerable indication from experimental studies (Copp and Barclay, J. Metabolic Research, 4:445-51, 1924) to justify the assumption that insulin may act somewhat like a splint to a fractured limb, affording a chance for regrowth of insulin forming tissue if properly applied.

#### SUMMARY

The prognosis of juvenile diabetes before the introduction of insulin was invariably fatal. Since the advent of insulin the outlook is far more hopeful, and certain patients have shown some recovery of tolerance. The treatment should include the optimum caloric and protein intake and a safe fat-carbohydrate ratio. Vitamins should be emphasized, cod liver oil, green vegetables and heliotherapy are advocated. Insulin should be given in sufficient amounts to keep the blood sugar approximately normal even to the risk of occasional hypoglycemia. All foci of infection should be removed. All children with doubtful symptoms should have a glucose tolerance test, elimination of foci of infection, and should be kept under observation for an indefinite period as is done with congenital luetics.

I wish to thank members of the staff of the Children's and University of California hospitals for courtesies and help to make this study useful.

#### DISCUSSION

HORACE GRAY, M.D. (Santa Barbara Clinic, Santa Barbara, California)—Passing over the three patients with diabetes insipidus, which is hardly related to diabetes mellitus, there remain nineteen cases diagnosed definitely diabetes mellitus and nine called *questionable*. This last group is interesting both because it forms so large a fraction of the whole series reported and because doubtful and cured cases in children have curiously enough received very little attention in the literature. Probably all nine cases, certainly the two border-line cases "having made apparent recovery," would be worth tabulation in respect to their symptoms at the worst stage observed, for example, the highest degree of glycosuria and of hyperglycemia found in each case.

The cases with onset following *gastrointestinal* attacks, especially the four with abdominal pain, again form a group of special importance, inadequately covered in the literature. Tabulation of these would be interesting, espe-

cially as regards the interval between the gastrointestinal upset and the diagnosis of diabetes.

The *blood sugar* maximum 0.760 and minimum 0.228 per cent seem high in view of the frequent observation in children of low blood sugar with even severe glycosuria. A table of the blood sugars found in the twenty-eight patients would therefore be worth having on record.

Regarding the distribution of *diet* in children, Doctor Smyth appears to favor the minimum carbohydrate, in other words, a high fat diet. It might be of interest to report the average diet given to his children expressed in grams of carbohydrate, protein, and fat per kilo of body weight, thus permitting comparison with diets fed in other clinics.

The rôle of *acute infections* as stated in the paper gives the impression that there were fifty-nine cases in the series or else that several patients had several infections in the past. The latter seems to the reviewer of no significance because, if the infections named merely occurred at some time in the past history of the children, their connection with the diabetes seems too vague to be worth discussing. One would prefer to know the name of the infectious disease, if any, which occurred within three (or perhaps six) months before the onset of the diabetes.

The *sex frequency* noted is striking in view of the statement on page 125 of Joslin's book that only 57 per cent of the cases were males, both in his series and in that of Schmitz, which are by far the largest series reported; and that among the diabetic deaths in the United States only 45 per cent were males.

WILLIAM W. BELFORD, M. D. (Electric Building, San Diego)—The absence of the characteristic symptoms of diabetes in so many cases, both the proven and the border-line, and especially in the primary symptoms of those patients under 7 years, is striking. Careful routine urine examination is to be emphasized.

Doctor Smyth's outline of treatment works admirably. The calculation of the diet is simple and the amount of protein, fat, and carbohydrate is such that the diet is quite palatable. That tolerance of some degree is recovered is hardly to be doubted when one sees smaller and smaller doses of insulin given and the patient showing no glycosuria. Those with no tolerance or "total" diabetes are difficult to keep sugar-free and often have insulin reactions. Lapses in the care of the prescribed diet or the occurrence of an infection rapidly lowers the recovered tolerance which is not regained, all too often, when the diet is corrected or the infection overcome.

That the simplest foci of infection are not to be ignored in the diabetes of childhood cannot be too strongly stressed. Carious teeth, infected tonsils or sinuses must have attention before the tolerance for carbohydrates is completely lost. As to prognosis, it is by no means bad when the parents are thoroughly co-operative. When a boy of four weathers an acute appendicitis with peritonitis, one is well pleased. It is truly remarkable when it is learned that this same sturdy boy has been a total diabetic since the onset of the disease before 2 years of age and, in addition, has had bronchopneumonia and otitis media. Diet and insulin regulations were religiously followed by the mother, and the boy suffered no particular hardship.

DOCTOR SMYTH (closing)—The diabetes insipidus cases were included in the group because on admission they were diagnosed diabetes mellitus and as such presented certain symptoms similar to diabetes mellitus.

The above series of cases is so small as not to be comparable to the larger summaries of Joslin and others. A table of blood sugars for the entire group would be extremely valuable, but as some of the material was taken from records of several years past, accurate data were frequently wanting. Acute infections, especially if occurring in succession, appear to us of more than vague significance, although the time relation to the onset of diabetes sometimes should be mentioned.

As to diet distribution in children, it has been our plan to use fairly low carbohydrate. It was mentioned that the individual ketogenic ratio is the guide to the fat adjustment. We believe the possibility of reducing the insulin to a single injection or even eliminating it altogether is greater with low carbohydrate diets. This materially



aids in the prognosis where subsequent care is entrusted to the family. Where, however, the requirement for carbohydrate and the severity of the case require large doses of insulin, the patient resembling a chronic adult diabetic, there would be no contraindication for the high carbohydrate values as advocated by the Santa Barbara clinic. In children, however, the chances of recovery of autogenous tolerance seems to warrant a lower carbohydrate intake with corresponding lower insulin requirement.

## LIVING TRICHINELLA THIRTEEN YEARS OLD

By NEWTON MILLER \*

(From the School of Medicine, University of Utah)

DISCUSSION by Marshall C. Cheney, San Francisco; Alfred C. Reed, San Francisco; John V. Barrow, Los Angeles; Robert T. Jellison, Salt Lake City, Utah.

THE biology of this species is interesting and complicated. The adult males measure 1 to 1.5 mm. and the females 3 to 4 mm. in length. They are slender and taper from posterior to anterior end, which is pointed. The adults live for a few weeks at most in the intestines of carnivorous mammals, usually the rat, mouse, hog, or man. Here they mate; the males soon die and the females, after burrowing into the intestinal mucosa, give birth to many young, estimated at 1500 or more each. The larvae, thus discharged into the mucosa and submucous lymph, eventually reach the blood by way of the thoracic duct and are carried to all parts of the body. They leave the capillaries in the voluntary muscles and wander out among the muscle fibers. Others perchance reach the muscle by way of the lymph vessels or directly by burrowing through the tissues. After reaching the muscles, especially the diaphragm, intercostals and the muscles of the neck, tongue and eyes, they penetrate the sarcolemma, coil up and become inactive. Some are said to become imbedded among the muscle fibers. The invaded muscle fibers degenerate, connective tissue capsules form about the larvae and these capsules later become calcified. Thus imprisoned they may remain alive but inactive for months or years until the death of the host after which they may be eaten with the flesh of the host. The mammal ingesting the infected flesh of the first host becomes a second host for the encapsulated worms. The calcareous capsules are dissolved by the gastric juice in three to four hours and the worms set free to be carried into the intestine. Here they grow, reach sexual maturity in three to four days, mate and produce a brood of larvae which will become imbedded in the muscles of this host. The adult males die in a few days after being liberated in the stomach, and the gastrointestinal tract is free of both larvae and adults in about six weeks. Thus the cycle has been and may still be repeated *ad infinitum*. Rats are common carriers and, since they frequently eat their own dead, the trichina life-cycle can be repeated indefinitely within the bodies of these rodents. Among the animals devouring rats are the hogs. We learn from

United States reports on meat that 2 to 3 per cent of all pork marketed for exportation is infected with the trichinae. Fifteen per cent of all hogs raised in some localities within the eastern states are said to be parasitized. The human being eats pork and thereby hangs a tale.

Thirteen years ago Mrs. E. L., then a girl of 18, and her sister living in Laramie, Wyoming, ate some improperly prepared pork sausages. In fact they had eaten of the sausage on their way home from the meat market. The girls experienced no immediate ill effects, but on the fourth day both developed severe abdominal pains and cramps accompanied with severe diarrhea. The elder sister recovered from these symptoms in eight or ten days and has suffered no subsequent ill effects. The younger sister, Mrs. E. L., had scarcely recovered from this attack when she experienced further distress, as stiffness and intense generalized pain in the muscles very similar to acute muscular rheumatism, accompanied by marked anemia, puffiness of the face, edema of limbs, and fever. The condition became severe and the life of the girl seemed jeopardized. However, during the fourth or fifth week after eating the sausage the muscular pain and tender-

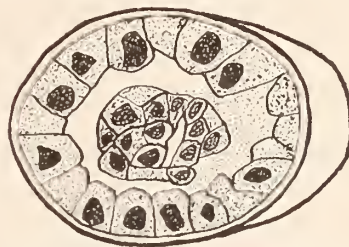


Fig. 1—Camera lucida drawing of a cross section of a *T. spiralis* removed from Mrs. E. L. X 1500.

ness began to subside and eventually disappeared completely.

The girl grew to womanhood, married and raised a small family. She has not suffered any further pain or discomfort incident to the infection of thirteen years ago. The lady, now Mrs. E. L., entered the Salt Lake County General Hospital November 9, 1923, for the purpose of undergoing an abdominal operation. In taking the routine history the above-mentioned data were obtained which are given as the patient recalled the events. The operation was performed November 15, 1923. An examination of the incised muscle (right rectus abdominis) revealed to the naked eye the capsules of the encysted worms in abundance. In fact the meat inspector's expression "measley pork" could well be paraphrased "measley homo" and applied to this patient.

A piece of the right rectus was excised and more carefully examined. An estimate of fifteen to twenty worms per cubic centimeter of muscle was made. Pieces of the muscle, after being treated with dilute hydrochloric acid, were teased and examined microscopically. The outlines of the entire worms were nicely revealed, and it was plainly evident that the worms had not been absorbed nor were they calcified.

The next question then arose, were the worms still alive? To answer this question other pieces of the muscle were prepared by the usual histological tech-

\* Newton Miller (Salt Lake City, Utah). M. D. Rush Medical College, 1924; A. B., 1905 and A. M., 1906, Indiana University; Ph.D., 1908, Clark. Appointments: Professor of Microscopic Anatomy at the University of Utah Medical School. Practice: General. Scientific organizations: Salt Lake County Medical Association, Utah State Medical Association, American Medical Association. Publications include a number of papers upon biological subjects, and among those that have a direct medical bearing are: "Gunmata of the Heart," "Anastomoses of Arteries and Veins in a Cat," "Reproduction in the Brown Rat."

nique for microscopic examination in order to determine the status of the vermician cells. The outlines of the cells were distinct, the nuclei were intact and stained deeply, and the general appearance was that of recent living tissue. Had these worms been dead for a few days or longer their cells would have lost their clear outlines and the nuclei their staining property. If dead for a long time they would have been absorbed or calcified. The camera lucida drawing, Figure 1, gives a fair idea of the histological condition of these worms. The worms were evidently alive when removed from the patient's body.

The lady is still alive. How much longer will the worms live? Ziegler mentions cases in man where the larvae were still alive eighteen to twenty years after the infection. Chandler states "there are records of these worms found living in cysts in hogs eleven years after infection and in man twenty-five to thirty-one years after, though it is doubtful whether in some of these cases a fresh infection did not occur." Concileman gives twelve years for the length of life in man and eleven to twenty-four years in the hog. In the case of Mrs. E. L. there has been no evidence of reinfection. We therefore feel justified in stating that we have a clear case of larvae trichinella thirteen years old, still alive in living human muscles.

#### DISCUSSION

MARSHALL C. CHENEY, M. D. (2251 Telegraph Avenue, Berkeley)—It is interesting to note that, even though alive in the muscles for thirteen years, the trichinellae larvae produced symptoms for only a few weeks, immediately after the invasion of the tissues. This is not always the case, as soreness and stiffness may persist more or less indefinitely. We are indebted to Doctor Miller for this case history which draws our attention again to the fact that human trichinosis simulates acute nephritis. An eosinophilia and the absence of typical urinary findings should suggest the possibility of a worm infestation. Absolute diagnosis is made by microscopic examination of a piece of excised muscle. As the period of acute illness can be greatly shortened by appropriate treatment with intravenous antimony and potassium tartrate, the possibility of trichinosis should be kept in mind and the tests made to apprehend the worms. From the standpoint of prevention, we should all heartily endorse all measures for the eradication of rats, the careful inspection of pork, and public enlightenment on the dangers of eating raw meat.

ALFRED C. REED, M. D. (380 Post Street, San Francisco)—Doctor Miller's paper emphasizes the need of keeping in mind trichinosis as a rare but always very possible condition in ordinary clinical work, gastrointestinal disturbance, with localized pains and edemas, irregular fever, and eosinophilia usually mean this diagnosis. Careful study of the blood and at times the spinal fluid will often reveal the larvae in the invading stage before intramuscular encystment. The tendency toward small epidemics, the high mortality reaching even to one-third of those ill, and the difficulty of effective early treatment, make this a disease demanding quick recognition. It is interesting to note that some years ago Dr. Herbert C. Moffitt recommended small doses by mouth of tartar emetic in treating the acute invasive stage. In the American Medical Journal, August 1, 1925, Grove reports a most interesting case in which apparently clinical cure followed the intravenous use of tartar emetic. This drug is now used in a number of tropical and parasitic diseases intravenously with virtually specific results. With proper technique it is safe. I would be greatly interested in fully reported cases where it is tried early in trichinosis.

JOHN V. BARROW, M. D. (2007 Wilshire Boulevard, Los Angeles)—Doctor Miller is to be congratulated on giving

us a very helpful clinical research observation in the line of parasitology. In my own experience the only helpful thing I can add is the fact that I have not had a case either in my own practice or in the general hospital work over a period of years. This disease is often confused with typhoid fever, and the disease here presents itself neither as a complication nor a differentiation. On the typhoid service of several years we have observed the cases rather closely for this disease in the cases that showed need for differentiation.

ROBERT T. JELLISON (Deseret Bank Building, Salt Lake City)—The case report by Doctor Miller is indeed one of interest. The demonstration of the live larvae trichinella after so many years brings up the question as to how great a percentage of cured cases might give the same findings if carefully followed up.

The mortality rate of 5 per cent is not high considering the number of cases reported, but this includes all mild cases in which the dosage of parasites was low and the toxemia moderate.

A few years ago a number of cases came under my observation. They were not severe, although their course ran from two to six weeks. The temperature ranged from 101 to 105 and was remittent in character. Gastrointestinal disturbances occurred early; all showed a leucocytosis with an eosinophilia from 15 to 46 per cent. The trichina spiralis were demonstrated. No fatalities. No complications. Treatment used was purgation, intestinal antiseptic, and neosalvarsan 6 to 9 grains, three days. Four doses was the highest amount given. No follow-up examinations could be made.

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"In every society some qualities are valued and supposed to be admirable and good, and are selected and rewarded accordingly. Hence the lucky possessors of these qualities are highly remunerated and enabled to rise in the social scale.

"Social promotion is thus the reward of whatever merits a society chooses to recognize.

"But this reward of ability is also its capital punishment.

"For as it rises it passes from a social region in which the birth rate is relatively high and the prospects of parentage are comparatively good to others where the birth rate gets lower and lower.

"The higher it gets, therefore, the more it tends to be sterilized.

"Thus the particular kind of ability a society recognizes, the cream the society wants, is always rising to the top; but when it gets there, it is always being skimmed off and cast away.

"The civilized state is continually pumping up from the lower strata the particular sorts of ability that are valued, concentrating them in the upper strata, and there destroying 50 per cent of them in every generation."—F. C. S. Schiller.

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If the men and women of today wish to retain the family approximately in its present form, they can keep it much as it is now. But to do so they will have to make tremendous alterations in some of the most powerful tendencies of our economic and social life. If they wish to adapt it to these changing conditions they should not delay the foresighted fashioning of some development in which it can function without too great loss of its invaluable services. For nothing is surer than that if it is left alone modern life will soon mangle it into a ruin fit only for the rubbish-heap.—Florence Finch Kelly, Century Magazine.

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The growing prestige and power conferred on public health officials bring with them new and greater responsibilities together with a mighty army of individuals, groups and organizations, desirable and undesirable, who, for many diverse reasons, creditable and discreditable, well-meaning but often ridiculous, find it expedient to enlist under the banner of public health.—Matthias Nicoll, Jr., J. A. M. A.



## THYROGLOSSAL TRACT CYSTS

By JOHN HUNT SHEPHARD \*

IT IS more appropriate to speak of thyroglossal tract cysts than thyroglossal duct cysts, as they are usually termed, for rarely is there a complete duct present.

When the human embryo is about 5 millimeters long an evagination appears on the ventral surface of the pharynx just posteriorly to the tuberculum impar. This point of evagination corresponds to the line of future fusion of the three portions of the tongue, and as they unite the orifice is prolonged upward forming the canal of His or thyroglossal duct. Usually by the fifth week of fetal life this canal begins to atrophy, and by the eighth week is completely obliterated. The foramen cecum on the posterior aspect of the tongue marks the site of this embryologic duct. From the ventral evagination above mentioned, the middle lobe of the thyroid develops. The two lateral lobes of the thyroid make their appearance a little later from the fourth inner visceral furrow. The three lobes unite about the seventh week of fetal life. As development progresses, the thyroid is drawn downward to its normal position below the level of the thyroid cartilage. If during this developmental period any of the epithelium of the canal of His fails of complete obliteration it may give rise to aberrant thyroid tissue or its secretion may give rise to a cyst, anywhere from the foramen cecum to the middle lobe of the thyroid gland.

The hyoid bone develops in three parts. The two lesser horns developing from the second visceral or anterior hyoid arch and the body develops as an unimpaird structure from a rod of cartilage developed in the third or posterior hyoid arch. This cartilaginous development does not occur until after the thyroid anlage has descended below its level, and the body of the hyoid bone develops in the plane of the thyroid descent. If there remains any unobliterated epithelium of the canal of His it may lie either anterior or posterior to or be surrounded by the body of the hyoid bone.

The diagnosis of cysts of the thyroglossal duct tract is readily made when they point on the surface of the neck, as they appear in the midline in close contact to the hyoid bone, and so far as I know no other cystic tumor has been described in this exact location. While they may make their appearance in infancy, they are usually first noticed when the child is 8 to 15 years old. They practically never become infected before they either rupture spontaneously or

have been "lanced," and to the discredit of the profession they are usually lanced. When they develop in the upper half of the tongue they cause a swelling toward the foramen cecum and may cause considerable discomfort without any visible evidence. In such cases a careful palpation of the tongue will define the swelling as being intraglossal, and only at operation is it possible to differentiate such a cyst from a lingual thyroid.

The treatment of thyroglossal tract cysts is surgical, and only by a complete removal of all the epithelial tract will recurrence be avoided. Since only occasionally is the epithelium all below the hyoid bone, it is usually necessary to carry our dissection well above this point. Those of us who have tried to inject these tracts with various dyes in order to identify them during our dissection know how unsatisfactory this procedure is. The walls are thin and the tract is usually lost a short distance above the hyoid bone. When this occurs, healing is slow and recurrence certain. This is the history of these cases in the past, and consequently the profession has come to look upon them as very unsatisfactory, since recurrences far outnumbered the cures.

A review of our anatomy of this area shows us that the midline of the neck from the hyoid bone to the foramen cecum of the tongue consists only of fibrous and muscular tissues; that the submental triangle bounded laterally by the anterior bellies of the digastric muscles contains no important structures, and so long as we confine our dissection to this area we can do no harm. The hyoid bone is only an interposed fulcrum for muscular attachments and when sectioned gives free exposure to the undersurface of the tongue. In 1921 Sistrunk described a technique for operating these cases which, if followed, will, I believe, result in practically 100 per cent cures. A transverse incision about two inches long is made through the skin and platysmus muscle just above the level of the hyoid bone. This places the scar where it is practically invisible. The cyst, if it has not previously been "lanced," or the tract is isolated from the surrounding tissue down to the hyoid bone. The muscles attached to the body of the hyoid are cut free and about one-eighth of the center of the body is removed by small bone forceps. This allows the two lateral parts of the hyoid to be retracted, giving ample working space. No attempt is made to identify the thyroglossal tract, but a core of muscle and fibrous tissue about three-eighths of an inch in diameter, running from the hyoid bone to the foramen cecum, is removed. If one is in doubt as to the exact line of dissection to follow, an assistant may hold his index finger on the foramen cecum and thus localize the point toward which one works. If one so chooses, the last part of the dissection may be done with the cautery. The hole at the base of the tongue is then closed and the muscles along the tract approximated. The cut ends of the hyoid bone are untied with chromic gut, a silkworm drain inserted, the platysmus sutured, and the skin approximated with a subcuticular stitch. Slight drainage may persist for ten to fourteen days. Following this operation the patient may have an apparent throat paralysis with fluids returning through the nose

\* John Hunt Shephard (214 Twohy Building, San Jose, California). M. D. Rush Medical College, 1904; S. B. University of Chicago, 1902. Graduate study: Michael Reese Hospital, Chicago, 1904-06. Previous honors: Instructor in Surgery, P. and S., Chicago, 1905-06; member of staff, Mayo Clinic, 1916-20. Hospital connections: Attending Surgeon, San Jose Hospital; Attending Surgeon and President of Staff, O'Connor Sanitarium. Scientific organizations: Santa Clara County Medical Society, California Medical Association, American Medical Association. Practice limited to Diagnosis and Surgery. Publications: "Esophageal Diverticula," *California and Western Medicine*; "Factors Influencing Morbidity and Mortality in Exophthalmic Goiter," *California and Western Medicine*; "Adenomatoma of the Thyroid," *California and Western Medicine*; "Squamous Cell Epithelioma of the Lip," *Surg. Gynec. Obst.*; "Reduction of Dorsal Dislocations of the Hip," *Surg. Gynec. Obst.*

when attempting to drink. This, however, disappears in three or four days.

In conclusion, thyroglossal tract cysts are due to an embryological defect.

Complete removal of the epithelial tract is easily accomplished by section of the hyoid bone and coring out of the muscles from the hyoid bone to the foramen cecum.

## THE USE OF THEOBROMINE FOR PAIN OF ARTERIOSCLEROTIC ORIGIN

By WILLIAM DOCK\*

DISCUSSION *by J. J. Sampson, San Francisco; Philip King Brown, San Francisco; Henry H. Lissner, Los Angeles; Harry Spiro, San Francisco.*

THE continued administration of theobromin to prevent the attacks in angina pectoris was introduced by Askanazy over thirty years ago, and two years ago he was able to point out that satisfactory results had been attained and reported by many physicians. This particular method of using theobromin has not until recently received more than incidental reference in papers on angina from American and English sources, nor is it generally used in our clinics because, like many remedies for heart disease, its action is inconstant.

Theobromin occurs naturally in cocoa; it differs from caffeine only in containing one less methyl group. Of the three closely related drugs, caffeine, theophyllin, and theobromin, the latter is least irritant to the nervous system and stands second in activity as a vasodilator and diuretic. That the vasodilant effects of these drugs are marked in the coronary circuit has been proved by Heathcote and confirmed by others. Recent work of Fred Smith has shown that the blood flow through the mammalian heart muscle may be increased 15 to 20 per cent by theobromin in dilutions as high as 1 to 50,000, the effect of theophyllin is twice as great, while a mixture of the latter with ethylenediamin is four times as powerful. Theophyllin is too irritant to the nervous system to be given over any period of days.

No universal explanation of angina pectoris has been accepted, but from the time of Heberden the frequency with which it is associated with severe coronary sclerosis has been noted. I have found a modification of Sir James Mackenzie's classification very useful. Primary angina pectoris is that due to hardening of the arteries and reduced blood supply of the heart; secondary angina is that due to aortic disease, hypertensive crises, tachycardia or cardiac neurosis. The nitrites produce striking relief during attacks of both types of angina; they not only dilate the coronaries, but lower general blood pressure, decrease venous return and thus take a great burden off the heart muscle and the aortic wall. It is in patients whose arterioles are capable of sufficient dilatation to compensate for the resistance offered by narrowing of the larger branches that

we may expect, with a sound pharmacologic basis, to alleviate the condition with theobromin.

Experience has confirmed this reasoning, and it is important in prognosis to know that relief afforded by the drug is fairly definite evidence that disease in that patient is due to coronary sclerosis, but that it is not yet far advanced. It is precisely in such early cases of coronary disease that the differential diagnosis between primary and the more benign secondary type is most difficult.

It is obvious that attacks at intervals of a week or more rarely justify continuous medication of any kind, and that pain due to actual closure of the coronaries, or to paroxysmal tachycardia or some extracardiac factor is scarcely ever changed by theobromin. Aside from this the selection of cases is unimportant. If anginal pain occurs, theobromin should be given a trial, as it is inexpensive, causes no unpleasant effects and may be discontinued after four or five days if no relief is noted. The successful results are usually attained within two days.

My own experience with theobromin is about what could be predicted from the nature of the underlying pathologic changes. In most of the cases of angina no relief was given, but in an important minority relief was immediate and complete. The patients who improved were usually those with frequent, sometimes very severe, pain, moderate sclerosis of palpable vessels, and no other demonstrable circulatory disease. Two were men of about 50 with a history of years of immoderate smoking. In one patient attacks which had been occurring once or twice daily for months disappeared for almost a year, recurring whenever the drug was omitted. He then had a coronary occlusion, and died after eight months of heart failure without pain. A parietal aneurysm of the left ventricle was found at autopsy.

For years it has been known that nitroglycerin would relieve the intermittent limp or leg pain which so often occurs with arteriosclerosis of the tibial vessels. It is rarely used because the pain rapidly disappears on stopping, and occurs at intervals of a few hundred feet, which would make nitrite administration very frequent. After a rather dramatic experience with theobromin in such a case I was surprised to find no reference to the use of the drug in this type of arteriosclerotic pain either by writers on intermittent claudication or on theobromin. The patient was a tailor, 57 years old, whose disability had increased for six months in spite of having some infected teeth removed and being hospitalized, with bed rest and physiotherapy for six weeks. He had pain on walking two blocks, and had to stop after three or four. He was to have a periarterial sympathectomy, and was given theobromin to try for a few days. In three days he returned to say he had had no more pain and could walk any distance without having to stop. For the next two months he continued to take the drug, and whenever it was discontinued for a few days the pain recurred. He has been able to do without medication for the past four months, and the pain has not recurred. He had sclerosis of the arteries of the legs with calcification as shown in the x-ray; no pulsation was made out in the dorsalis pedis arteries or the left posterior tibial. There was no demon-

\* William Dock (335 Calaveras Street, Altadena, California). M. D. Rush Medical College, 1922; B. S. Washington University, St. Louis, 1920. Present hospital connections: Lane and Stanford Hospital. Appointments: Assistant clinical professor of medicine, Stanford University. Practice limited to Internal Medicine.



strable heart disease. I have since observed that the number of patients with presumed intermittent limp who respond to theobromin is small, for it is often difficult to be sure of the diagnosis, and the condition is frequently complicated by the presence of edema and varicose veins. In the patient reported on I do not believe that theobromin caused the disease to disappear, but tided him over to a spontaneous remission.

Theobromin sodio-salicylate in 7 to 10 grain doses can be given conveniently three times daily, in solution or in capsules. The proprietary calcium compounds are more expensive but better borne by irritable stomachs. If decided benefit is not noted in three or four days, further administration is useless. When the attacks are inhibited by the drug it can be continued indefinitely, decreasing the dose and discontinuing from time to time to see whether pain recurs. It is unfortunate that the more powerful theophyllin is too excitant to the nervous system to be given continuously, although in patients with cardiac infarction it may be given with morphin with the object of opening up the widest possible collateral circulation.

No patient with angina pectoris or intermittent claudication should be considered intractable or subjected to operation until theobromin has been tried. We must not expect to meet with success in many patients, nor should we abandon a method which is inexpensive, harmless and requires but a few days trial. The satisfaction of an occasional brilliant success so quickly and easily attained, amply justifies this line of attack on one of the most painful of chronic diseases.

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#### DISCUSSION

J. J. SAMPSON, M. D. (291 Geary Street, San Francisco)—I feel that we are indebted to Doctor Dock for bringing to our attention the use of theobromin in organic angina. It has seemed unfortunate that we have been forced to rely on the nitrites whose action is relatively so transient in those forms of angina in which pain is persistent. Such patients have necessitated gradually increasing doses with greater frequency until the efficacy of the drug has been reduced to a negligible value.

Doctor Dock is somewhat pessimistic in his prediction that closure of the coronaries, or advanced coronary sclerosis, as diagnosed by any of the criteria which we have at hand, is not amenable to treatment by theobromin. Since having this drug called to my attention, I have used it very successfully on one striking instance. The woman presented constant precordial and left arm pain for a period of five days which, with other clinical findings, convinced me that she probably had a high degree of coronary occlusion. The relief obtained from theobromin therapy may possibly be accounted for by an element of spasm superimposed upon the organic partial occlusion.

I should like to ask Doctor Dock whether essential vas-

cular hypertension was improved in any of his patients. He has discussed the dangers of central nervous system and gastrointestinal disturbances due to the drug but, as is known, in most patients with advanced arteriosclerosis pathological changes in the kidneys are present, and I should like to ask whether he has encountered evidence of further renal damage due to the theobromin when continued over a long period of time.

PHILIP KING BROWN, M. D. (Medical Building, San Francisco)—Doctor Dock's report throws light on the question raised twenty years ago by Forchheimer in the earliest edition of his work on therapeutics. A trial of diuretin was made by Forchheimer in all his cases of angina on the ground that diuretin dilated the coronary arteries and was therefore theoretically an ideal drug in angina. His conclusions were that it did not act as rapidly as the nitrites and it failed to act more frequently, and that further experience was required to show its precise indications. To these indications Dock has made a distinct contribution.

Another important part of Dock's paper is his classification of anginas in which he follows Mackenzie with certain modifications. Admitting that our knowledge of angina is wholly theoretical, that death in typical attacks has occurred where there was no pathological change in heart, aorta or coronaries, and that at autopsy even advanced disease of all three parts is repeatedly found without history of angina, we are left in the position rightly assumed by Dock of conducting a study of each case by consistent pharmacological method expecting that the careful records of patients relieved and those eventually studied at autopsy will throw light on the symptom complex and what induces it and controls it. With the same idea, W. B. Coffey and I have proceeded surgically controlling procedure by physiological interpretation and experiment as far as experiment is justified by safety. We have held that no patient should be dealt with surgically until all methods of relief medically had been tried without benefit. In this way we have collected much data about diuretin, and we agree that in low blood pressure patients with evident arteriosclerosis and myocardial change, diuretin does good. We have under care a patient nearly 70 who has had eight or ten major attacks in twenty years and innumerable almost daily minor attacks induced by smoking, indigestion or nervous disturbance and who has recently had one very grave attack of coronary thrombosis. Since this last condition diuretin is giving relative freedom from minor pains where it did not before. Another patient of thirty-seven years' standing, now 72 years of age, was unable to walk a half block without pain, and while nitroglycerin relieves him, he can do more without pain if he is on diuretin. The cardinal condition of his cardiovascular system is a dilated aorta, large heart and low pressure. A partial heart block made him seem to us a poor operative risk.

A word further about the classification of anginas. I believe that the division into types suggested by Mackenzie begs the question. Angina is a spasm relieved by therapy directed toward vasodilation. Herberden, who first described angina, recommended heat and mustard locally and alcohol internally. The remedies are still worth trial. When the spasm occurs in a cardiovascular system in which there is no pathological condition, death is less likely to occur. It is the arteriosclerosis in the aorta so often found at the orifice of the coronaries and the limited blood supply due to coronary sclerosis that makes the spasm the increasingly grave danger. In other words, all angina is serious and sooner or later will make itself felt as a grave matter. There is no rhyme or reason in the idea of Mackenzie that the frequency of attacks in women and certain types in men are not the same condition that holds in the grave attacks. The danger lies in the intensity of the spasm and the underlying disease of the cardiovascular system. If the patient lives long enough the minor attacks will be interspersed with major ones, as in the two cases I have cited.

HENRY H. LISSNER, M. D. (Insurance Exchange Building, Los Angeles)—Doctor Dock's report brings to our attention the question of the treatment of angina and arterial pain for review, not only of our past therapeutic experiences in the treatment of this alarming symptom, but also for a critical reconsideration of the theories of

angina in the light of our previous knowledge of the subject.

The various theories advanced by McKenzie, Osler, McCrae, Forsheimer, and others discuss the possibility of coronary spasm. There are many other aspects, however, which must be taken into consideration, and I am inclined to lean more toward the opinion of the French school and follow the opinion of Laubre that precordial pain is merely an expression of the lack of the reserve power of the heart muscle, and is not definitely due to coronary spasm and thrombosis. He reported cases of double coronary thrombosis with death, in which the patient never suffered from pain.

We have no evidence as to why vasodilators should relieve this particular type of pain. We have found from clinical experience that there are many patients who receive no benefit from nitroglycerin, theobromin or diuretin, and whose only expression of relief comes from the administration of morphin. We must also remember that angina pectoris and arterial pain show a pronounced tendency to remit. I have one such patient in mind who had four severe attacks of angina, the last one about nine years ago. This patient has an enlarged heart, dilated aorta, tortuous blood vessels, the axillary and brachial vessels on the right being greatly enlarged and sinuous; nitroglycerin or diuretin was used to control his attacks with occasional use of morphin. At present he is leading a useful life in the practice of law, but he has learned to know his physical limitations and to act accordingly.

I believe that the further clinical and experimental study of this most interesting condition will be necessary before we can definitely say what the actual pathological involvement is which causes pain and in this way look to a therapy which will be more directly indicated than our present knowledge of this condition suggests.

HARRY SPIRO, M. D. (Flood Building, San Francisco)—Doctor Dock should be thanked for his timely paper, timely because this appears to be the day of the surgeon. Medicinal methods for the alleviation of diseases are not as spectacular as surgical methods and so, frequently, surgical methods are recommended even though relief only is given.

Recently surgical intervention for the relief of attacks of angina pectoris has come to the fore. We thank the sponsors of this method for the attention they have drawn to an inadequately explored field. We thank them, for they have advanced medical knowledge.

I believe that the permanent blocking of the pathway of pain in cases of angina pectoris is of extreme importance, particularly so if one considers the theory which has been advanced, namely, that pain in itself may be of such intensity that it reacts on the vagus nerve supply to the heart, the vagus becomes overstimulated and this stops the heart action. This in itself would not be serious if the heart muscle is predominantly healthy, but if there are sufficient pathological changes present the heart may fail to recuperate and the patient die. This partially justifies surgical intervention, but you cannot cure angina pectoris by surgery. We are too apt to lose sight of the beneficial effects of medicinal treatment, and Dock's paper will undoubtedly reawaken interests in methods other than surgical for the relief of angina pectoris.

I do not believe in the theory that spasmodic contraction of the aorta is the cause of angina pectoris. The aorta is not built to contract. There is practically no muscular tissue in the aorta, it can stretch and can resume its former shape again, depending upon the amount of healthy elastic tissue present. If the aorta had the power to contract spasmodically, as some physicians believe, death would be far more frequent than it is.

I have watched patients during attacks of angina pectoris. I have had them before the fluoroscope during an attack, and it has appeared to me that the aorta has dilated instead of contracted. It may have been the sudden stretching of the diseased aorta which caused the pain. How then do the vasodilators give relief, because at times they do relieve pain? The answer must be in the peripheral blood vessels, because they contract and relax actively, not passively. They are under the control of the central nervous system, and entire systems of arteries can be made to contract or relax by medical means. As Dock has pointed out, preparations of theobromin are vasodila-

tors. They are moderately slow in their action and long in duration of action. If the peripheral vessels are relaxed the strain on the aorta is relieved. The most commonly used of these vasodilators is diuretin. This, as you have been told, is a preparation containing theobromin and salicylate. It is comparatively expensive to use and frequently causes gastric distress. As Dock has stated, some manufacturers have combined diuretin and calcium, and claim beneficial results. I believe the addition of calcium to diuretin does add to the effect of diuretin, but most often it has no additional beneficial effects. I have been experimenting for months with diuretin and theobromin preparations, in an endeavor to get a preparation which will not cause gastric distress. I am pleased to offer to you this fairly successful combination. It has been thoroughly tried and is not based upon imaginary results. It is a combination of diuretin and quinin sulphate, or theobromin and quinin sulphate. I do not know why the quinin acts so as to alleviate the irritating effect of the theobromin, but such is the fact. I have tried giving patients diuretin alone and have had them complain bitterly of gastric distress; then on the following day I have given a combination of diuretin and quinin and they have stated that they have had no distress, and on the following day diuretin alone has made them complain that the stomach was out of order. I ask you to try it.

I believe the medicinal treatment of angina pectoris to be better practice than the surgical treatment because if you can get results medicinally you frequently can get what can be considered a cure. Yes, even if the coronary arteries are plugged, a relative cure has at times been attained. Of course, the patient's tolerance to strain or exercise depends upon the elasticity of his coronary arteries, but even so, if that patient is given time, nature can partially compensate for almost completely plugged coronaries. Time, then, is what we wish, time for nature to come to our assistance. Theobromin is one preparation which will assist nature in coming to the rescue of our patients.

DOCTOR DOCK (closing)—In closing I wish to stress once more that the use of theobromin in warding off attacks of angina is an old practice, but has been confused with its other uses in heart disease, and attempts, such as Forsheimer's, which Doctor Brown has cited, to use theobromin instead of the nitrites during the attack. Severe coronary disease is less likely to respond than milder cases, but in any type trial of the drug is worth while. I have no data on the general effects of theobromin on the blood pressure, urine output, or urinary sediment of these cases, but none of them had serious renal damage before or after treatment. Tube casts and a trace of albumen in the urine are common, and at autopsy renal arteriosclerosis and even infarction not infrequent in this type of patient. Perhaps the strongest evidence that angina and intermittent limp are due to muscle pain, either from ischemia or overstrain, and not to spasm of vessels of any size, is the fact that infarcts of the heart or extremities can cause pain exactly similar to the periodic pain of angina pectoris and cruris, while infarction of the brain, kidneys, and vascular disease of these organs is quite painless. The effect of theobromin can be explained on the assumption that the work of the heart is diminished by its systemic action, and the coronary flow improved by dilating normal arterioles, whether narrowing of larger vessels occurs or not. Surgical intervention is of utmost value in patients whose attacks cannot be prevented. However, the operation which destroys the pain fibers is less satisfactory than that introduced by Doctors Brown and Coffey in which, as Langley pointed out, only efferent pathways are cut.

The vast majority of so-called "nervous breakdowns" are mental disorders. It is difficult for the laity to believe that those who suffer mental disorder are not usually insane. Insanity, conventionally, is a matter of conduct. One may be as full of insane ideas as a bank is of money, and still be sane in the light of the law and in the eye of his neighbor, if his conduct does not express these insane ideas.—Joseph Collins, Dearborn Independent.

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## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

### ACUTE INTESTINAL OBSTRUCTION

#### ITS ETIOLOGY UNDER DISCUSSION

By SAMUEL FLOERSHEIM \*

A female patient about 40 years of age in a tuberculosis sanatorium. Patient not doing well. Complained of stomach and intestinal symptoms. Bowels fairly regular. No nausea or vomiting, but indefinite pains and discomfort about the midabdomen. The only thing that could be found was a small mass above and to the left of umbilicus. About three or four weeks later the patient was attacked with a sudden severe onset of agonizing abdominal pain, acute intestinal obstruction with temperature up to 103 and pulse to 115, leucocytes 13,000. Nauseated and vomited. The medical superintendent treated the patient expectantly for twenty-four hours and then asked me to see her. The abdomen was thin, board-like, the facies were quite pinched. Strikingly prominent was the dermal and subdermal infiltration extending from the umbilicus up to the edge of the ribs and into the ensiform space on the left side. This area was quite tender even to light touch. This latter may have been caused by the application of an ice bag, as it was unnoticed previously.

A diagnosis of acute intestinal obstruction was made; its cause not clear. Absolute rest, slow and graduated pressure enemias of borax and hot water was advised to see if gas could be made to pass. This to be done most carefully so as not to increase the existing pain. Externally, cold (ice in bag covered with thick cloth). Small amounts of fluids by mouth. Should symptoms not mitigate in twenty-four hours it was then advised to remove patient to a hospital for operation. Six or eight hours after giving a few enemias, gas did pass and the patient became a little easier. A phone message next day was to the effect that the patient was somewhat easier and gas was going through. Three days following I saw her again and she seemed to me to be much improved. Four days later with the improvement continuing, a surgical consultant passing through the institution saw the patient and believed it to be a simple case of acute constipation. The patient improved steadily though slowly, and in three weeks became quite bright again though still abed and on back, the skin infiltration still persisting quite extensively and quite tender. Bowel movements occurring quite regularly. Four and a half months after the attack the skin infiltration still persisting about the midportion of the upper left hypochondriac area and slightly tender.

The medical superintendent offered a probable diagnosis of acute local peritonitis in which I concurred; the assistant, one of acute hemorrhagic pancreatitis to which the medical superintendent and I did not agree.

The probable cause of the peritonitis was in discussion. In view of the small mass to the left of the umbilicus and somewhat above which was somewhat painful and under examination was fairly tender a few weeks previously, I tendered as a possible cause a ruptured tubercular mesenteric gland—possibly adherent to the parietal (abdominal wall) peritoneum, probably rupturing into the

intestine. After nearly six months the skin induration is practically gone and the patient feels quite well as regards her gastrointestinal symptoms, though still under treatment for her pulmonary tuberculosis.

Dr. Langley Porter, writing from London, tells us of some interesting investigations carried out during the last four years by Dr. H. D. Corry Mann, on behalf of the British Medical Research Council, with regard to diets for boys during school age, and the results which have now been published.

"It is startling to learn," states the author, "as we now do, for instance, that the addition of one pint of milk a day to a diet, which by itself satisfied the appetite of growing boys fed upon it, could convert an average annual gain of weight of 3.85 pounds per boy into one of 6.98 pounds, and an annual average increase of height from 1.84 inches to 2.63 inches. This unmistakable betterment in nutrition was proved by trial to be due, not to the relatively small increase in the fuel value of the dietary, nor to the extra protein supplied in the milk, but rather to more specific qualities of milk as a food.

"It is of the first importance," the preface continues, "to notice that the improved gains in weight and height, taken as the measurable characters in this inquiry, were found to be accompanied regularly by improved general health and by improvement in what may perhaps be called 'spirit.' . . . The improved 'spirit' of these boys led to their being more often in trouble for minor offenses against order. No measurable indications were found of their having greater proficiency at school work, but this, in the absence of any modification of disciplinary or teaching methods, is not to be weighed against the general evidence for greater mental vigor."

The investigations were carried out in a colony for boys which is situated eleven miles from London, the boys being housed in a model village of nineteen cottages, eight of which were chosen for the experiments.

The basic diet was given to all the boys, but there was an addition to that diet in seven of the eight cottages. In one case it was a pint of fresh milk daily per boy, value 388 calories; in another 3 ounces of castor sugar daily per boy, value 350 calories; in a third case the ration was  $1\frac{3}{4}$  ounces (387 calories) daily per boy of the best New Zealand grass-fed butter; in two of the cottages watercress was used, the ration being  $\frac{1}{2}$  ounce to  $\frac{3}{4}$  ounce daily per boy; casein to the extent of  $\frac{3}{4}$  ounce per day per boy was served in another; while the seventh variation was vegetable margarine consisting of coconut oil and groundnut oil, the daily ration per boy being  $1\frac{3}{4}$  ounce, value 379 calories.

Observation was kept as regards summer and winter growth, and it was found that there was almost invariably more growth during the summer period than the winter period.

Sixty-one boys, who received only the basic diet of the village, gained an average 3.85 pounds per boy and grew an average 1.84 inches per boy during twelve months. Forty-one boys who received, in addition to the basic diet, the fresh cow's milk, pasteurized and homogenized, gained an average of 6.98 pounds per boy and grew an average 2.63 inches per boy during twelve months.

Twenty boys received the castor sugar ration, gained an average of 4.93 pounds per boy, and grew an average 1.94 inches per boy; twenty-six boys received the butter ration, gained an average of 6.30 pounds per boy, and grew an average 2.22 inches per boy; sixteen boys received the vegetable margarine, gained an average of 5.21 pounds per boy, and grew an average 1.84 inches per boy; thirty boys received  $\frac{3}{4}$  ounces of edible casein, gained an average of 4.01 pounds per boy, and grew an average 1.76 inches per boy; twenty-six boys received  $\frac{3}{4}$  ounces of fresh watercress, gained an average of 5.42 pounds per boy and grew an average 1.70 inches per boy. In each case the results were for twelve months.

The Roman citizens bartered their ancient liberties for bread and circuses. The American citizen today freely barter his individual liberties and rights for government bounties and bonuses. He demands government interference in everything and surrenders freedom and his individuality for it—F. F. Dumont Smith, Chairman Committee on American Citizenship.

\* Samuel Floersheim (1015 Story Building, Los Angeles). M. D. Bellvue Hospital Medical College, 1898. Previous honors: Formerly chief of clinic, Gastrointestinal Department, St. Mark's Dispensary and Hospital, and Stuyvesant Clinic, New York. Hospital connections: Consulting gastroenterologist, Jewish Consumptive Relief Association Sanatorium, Duarte, California; consultant gastroenterologist, Los Angeles Jewish Ex-patient Home Society. Scientific organizations: Los Angeles County Medical Society, C. M. A., A. M. A., vice-president medical staff Jewish Consumptive Relief Association Sanatorium. Practice limited to Gastroenterology since 1911. Publications: "Appendectomy in the Young for Prevention of Morbidity in Adult Life," "Chronic Appendicitis," "The Acute Abdomen: Pain in the Upper Right Quadrant; Pain in the Lower Right Quadrant," "Teeth in Relation to the Gastrointestinal Tract," "Diet in the Tubercular." Many publications the past years on gastrointestinal subjects.

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### A BRIEF OF THE EVIDENCE WHICH JUSTIFIES A DIAGNOSIS OF INFANTILE PARALYSIS

**The Editor**—There is a message—a useful message—in this discussion for every doctor whose practice includes the care of children.

"Polio" is a curious disease, protean in its manifestations, and often hides its identity from the unwary physician by simulating other less serious afflictions, at least during the period when much not later possible might be done for the patient as well as for the safety of other children.

Isn't "the answer" careful study and repeated examinations of our patients?

Interest in *Bedside Medicine for Bedside Doctors* continues to be encouraging. Many physicians are tasting their "first blood" as authors in these discussions. This is well, for no one who carefully writes out his discussion on one of these subjects will ever overlook a similar problem in his practice. Suggestions for subjects—sharply limited subjects—are invited.

**C. F. Gelston\***—Interest and importance are focused directly on the preparalytic stage of this disease. There are several types of onset to be watched for and recognized, since the results obtained by the early use of convalescent serum have recently been so eminently successful.

In the first type there is the history of a sudden acute illness with high temperature from 103 or 104 quickly followed by vomiting, slight diarrhea, and convulsions. This is seen particularly in young infants, and proceeds to almost constant convulsion, stupor, and death.

The second type is ushered in by sudden acute illness with temperature to 103-105, headache, congested throat, slightly stiff neck, exaggerated reflexes a positive Kernig, and pain in a group of muscles, for instance, the leg. This form leads rapidly to weakness in the group of muscles, loss of reflexes, and development of paresis or paralysis.

The third type has a sudden acute onset as above, but with more rapid advance and more intense symptoms and signs. Diarrhea is marked, accompanied by vomiting and a quickly ensuing delirium, strabis-

mus, and difficulty in swallowing. This fulminating type, so-called bulbar, formerly has been constantly fatal.

The fourth type has a slower onset, over twenty-four to forty-eight hours or longer, characterized by malaise, headache, slight fever or none, diarrhea, frequently nausea, then proceeding to severe headache, neck rigidity, heightened reflex response, positive Kernig, and considerable toxemia.

All of these forms show an increased spinal fluid pressure, increased cell count, increased globulin, with the sugar frequently unaltered. The cells are usually small mononuclears, but in an early stage may be polymorphonuclear. The total count varies between 15 and 300, on occasion even higher.

The above types are emphasized in contradistinction to those appearing with paralysis or paresis, since in the latter the diagnosis should be unquestioned when the case is adequately studied from the differential standpoint and since serum therapy is of no value.

On the other hand, in the preparalytic patients, there is great opportunity for effective therapy if they are recognized at once and, as Shaw, Thelander and Fleischner have recently pointed out, if they are treated at once and with sufficiently large doses of convalescent serum.

**A. J. Scott, Jr.\***—The following notes are based on patients seen during the recent epidemic of poliomyelitis.

Some patients, during the early stages of the disease, have practically no symptoms other than a slight indisposition and slight muscular weakness. The mother relates that the child was normal in all respects up to a certain date when it became weak from no apparent cause. On examination it may be found that the head tends to be wobbly and sags on sitting the child up, as though the back muscles were too weak to hold it in the erect position; no paralysis, merely weakness. There may be some sensitiveness on handling. The reflexes usually are all present. The temperature is not high. Such a patient responds readily to the use of convalescent serum or that of Doctor Rosenow.

Another type is occasionally seen with congestion of throat, moderate temperature of 101-101.5, and some pain in ankles or wrists, which in a child around 2 years old should make one suspicious of poliomyelitis, since rheumatism at that age is very

\* **Clain F. Gelston** (409 Fitzhugh Building, San Francisco). M. D. University of California, 1915; B. S. University of California, 1912; M. S. University of California, 1913. Graduate study: Internship, Residency U. C. Hospital, 1915-17; Hospice De Brousse, Paris, 1924. Previous honors: U. S. Army, Lt. Med., May, 1917, to August, 1919; chief of staff, American Hospital, Evian, France, 1917-18; Medaille des Epidemics, French Government, 1919. Hospital connections: Attending pediatricist, Children's Hospital; visiting pediatricist, San Francisco Hospital; (chief of service) University of California Hospital; consulting pediatricist, Shriners' Hospital; Ross Valley General Hospital. Scientific organizations: San Francisco County Medical Society, C. M. A., A. M. A., Northern California Pediatric Society (president, 1926-27). Present appointments: Instructor University of California Medical School (pediatrics); president (pro tem.) Medical Milk Commission, San Francisco County Medical Society; Captain M. O. R. C., U. S. Army, Practice limited to Pediatrics since 1919. Publications: "Hemorrhagic Diseases of Newborn," "Thick Feeding in Pyloric Stenosis," "Mental Hygiene of Pre-School Child," "Certain Acute and Chronic Upper Respiratory Infections," "Public Health Problem in France," "Result of Examination of Thirty-five Thousand French Children," etc. (Am. J. Dis. Child., Arch. Pediat., etc., 1919-26).

\* **A. J. Scott, Jr.** (1401 South Hope Street, Los Angeles). M. D. University of California (Los Angeles Department), 1909. Practice limited to Pediatrics. Hospital connections: Los Angeles General, California-Lutheran, Anita M. Baldwin, Hollywood, and White Memorial hospitals. Appointments: Member California State Board of Health; Professor Clinical Pediatrics, College of Medical Evangelists, Los Angeles. Scientific organizations: Member of Los Angeles Obstetrical Society, Southwestern Pediatric Society, Fellow of the American College of Physicians. Publications: Several articles in state and national medical journals.



rare. Here the response to the use of serum is rapid; if untreated, paralysis usually follows.

An older infant who has been walking a few weeks suddenly develops a tendency to stumble, then in two or three days an inability to stand without falling. Reflexes all present, marked weakness of back and leg muscles, no membrane in throat, slight temperature and marked hoarseness of voice, slight congested throat; rapid and complete recovery with serum, and voice clears up at same time.

Another child of short illness with slight vomiting, constipation, and low temperature is noticed to drag one foot when walking. The knee jerk usually is absent. There may be only involvement of the tibialis anticus muscle. Rosenow's serum and splint for two weeks results in marked improvement, though slight dragging of the foot may persist for another month.

Patients of the above classes are frequently overlooked during an epidemic and may be wrongly diagnosed unless definite paralysis occurs. These are types actually seen, and are of the mild or abortive type.

It is not always feasible to have laboratory work done for these patients, and the knowledge of normal activities of the infant or young child when suddenly interfered with should make the experienced physician suspicious of a poliomyelitis, whether an epidemic is present or not, but more so during an epidemic.

**Paul S. Barrett**—The prodromal period, that is, before the onset of paralysis, is the one in which a diagnosis should be made if we are to take advantage of the serum treatment.

A careful history, while not diagnostic, may be of great aid, particularly when the disease is prevalent. One of the most constant initial symptoms is elevation of temperature ranging from 101 degrees in the milder types to 106 degrees in the fulminating types. A not infrequent type seen in the New York epidemic of 1916 was a slightly increased temperature for a few days followed by three or four days of apparent health, then another increase in temperature followed by paralysis.

Vomiting is a very frequent early symptom often accompanied by diarrhea or, in some instances, constipation.

The history of an early mild respiratory infection often may be elicited. Drowsiness or irritability are important facts which may be brought out about the onset, and it is well to be on the lookout for a marked general hyperesthesia manifested as sensitiveness of the child to touch. Pain on motion and tenderness along the spine when accompanied by an unclouded mind are very suggestive signs. Slight Kernig or Babinski signs are often present early and the knee jerk may be diminished or when the upper extremities are involved the knee jerk may be exaggerated.

The diagnosis can be made positively only by a lumbar puncture and examination of the spinal fluid. The former can be done at any bedside, and the latter is a procedure which can be carried out in an office laboratory.

When poliomyelitis is prevalent any febrile con-

dition is suspicious, especially so when the central nervous system is involved. The diagnosis, however, which warrants the administration of serum can only be made after a lumbar puncture.

**Clara E. Finney** \*—A child, either robust or less so, becomes ill. The onset may be sudden or more insidious. He may be severely ill or slightly so. His temperature may range from 100 to 106. He may be restless with unclouded mentality or listless and dull. He may vomit more or less. He may be constipated or have diarrhea of varying severity. Anorexia is probably present. He may have been ailing a day or a week. He may complain of abdominal pain or he may not.

With any combination of these symptoms we still have no clear picture of poliomyelitis. If in addition to them we have a child heretofore friendly to the family physician during previous illnesses, suddenly antagonistic, the fact merits careful examination. He resents examination and prefers to lie with pillow shoved aside and his head burrowed into the mattress. His mother may help the diagnosis by, "He is so cross, I can't please him. He won't let me change his clothes, and he won't even let me hold his head up to feed him," or "He doesn't want me to touch him." She may or may not report that he refused all her offers of comfort because, "my head hurts."

Lift such a child by placing one arm under his head and the other under his knees. His pain is unquestionable. His pulse may be a trifle rapid, and his reflexes are always in some way abnormal. His mother may say he fails to urinate often enough. His gastrointestinal findings may suggest diarrhea when, on the contrary, he is constipated.

A spinal puncture gives us a fairly satisfactory aid to diagnosis.

**The Editor**—Doctor Finney's letter transmitting the above discussion contains the following paragraph, which is added here because of its value:

"The subject is one I really wanted to discuss, because we miss, I believe, the points I have emphasized. No matter how pleasant it is to make a diagnosis in the preparalytic stage, there is really no perfect check on such a diagnosis until or unless confirmed by the subsequent course of the disease. And, too, we still get most of our patients too late and we often forget to use sufficient care in providing rest and relaxation for damaged muscles so vitally important to the final outcome. With all sick children, we too often consider spinal puncture a last diagnostic aid."

**R. W. Homer** \*—The foregoing paper and discussion are indeed of interest and of great value,

\* **Clara E. Finney** (1115 First Street, Modesto, California). M. D. Stanford, 1920; A. B. Mathematics, 1906. Graduate study: Children's Hospital, San Francisco, 1919-20. Hospital connections: St. Mary's, McPheeters, Robertson. Present appointments: Physical examiner Orestimba High School. Practice: General, specializing in Pediatrics since 1920.

\* **R. W. Homer** (First National Bank Building, Ventura, California). M. D. University of California, 1911. Graduate study: Internship, Los Angeles County Hospital, 1911-12. Previous honors: Lieutenant Jr. Grade Navy Base, No. 3 Station, Edinborough, Scotland. Hospital connections: County physician, Ventura County Hospital; chief of staff, Big Sister Hospital, Ventura, California. Scientific organizations: Ventura County Medical Society, California Medical Association, American Medical Association. Practice: General since 1912.

particularly when poliomyelitis is prevalent in a community. But I believe we have yet to find a definite diagnostic symptom of the early onset of the disease. The fever, vomiting, diarrhea, constipation, irritability, etc., being as common to all children's diseases, they are not diagnostic except during epidemics when any ill health makes us suspicious.

I should like to emphasize one of the symptoms suggested by Doctor Scott: that of generalized muscular tenderness, weakness, and pain. In a rather limited number of patients I have found this condition to exist in all. Several never complained of it until questioned closely and, of course, in a very young child it can be of small value, but if closely checked up I believe will be found present in a large percentage of polio patients and not found in many other children's diseases.

As a case in point: In 1921, when there was little poliomyelitis in California, I saw a boy 14 years of age complaining only of dizziness, rather severe headaches, and indefinite pain in arms, legs, and back. There was slight rigidity of the neck. Having just had a tubercular meningitis patient, a lumbar puncture was done on this boy revealing a markedly increased cell count and globulin. Slight paralysis of one-half tibialis anticus developed.

Again, in 1925 a boy of 9 years with temperature  $99\frac{1}{2}$ , slight headache and general malais, indefinite pain in the back, legs, and arms, was brought to my office chiefly because of the presence of poliomyelitis in Los Angeles at that time. The following day he was quite apparently improved, but was kept under close observation and five days later developed a definite paralysis of the gluteus.

One rather hesitates to do a lumbar puncture on all slightly ill patients on suspicion, but I believe it justified in all children with even slight fever and generalized indefinite pain and soreness of the muscles not otherwise satisfactorily accounted for.

**L. K. Van Allen**—Never having had patients with infantile paralysis, I may only discuss the symptoms that would make me suspicious and cause me to make a spinal puncture. I realize that an early diagnosis is all important if anything is to be done for the patient. I think now that if a child patient were to appear as suffering from headache combined with the usual prodromal symptoms of infections and then were to appear unusually sensitive to touch and showed even a mild rigidity of the neck muscles and spine, this would cause me to think of infantile paralysis and to so inform the parents and advise a spinal puncture at once. As I understand the matter, there is no symptom or group of symptoms that can be said to be diagnostic of this disease. But if in addition to the above-mentioned symptoms the child showed a gastrointestinal upset I would feel even more the necessity of spinal puncture. This all, of course, refers to the mild case where no epidemic exists. If in addition to these symptoms one had extreme temperature and toxemia the case would be clearer.

I mention these things because the physician in general practice must have something definite on which to base a diagnosis of such a severe condition when the diagnosis is so difficult to make. And I

believe that while the majority of physicians of this state have not seen a case of infantile paralysis, yet any one of us may be called upon tomorrow to save or lose a life, or prevent a paralysis by being able to diagnose the mild case that appears when there is no epidemic. So that while I am unable to discuss this subject from the standpoint of one who has treated these patients. I thought you might be interested in knowing what a physician who had not as yet treated such patients understood what was necessary to make a diagnosis.

I am delighted to know that you are conducting such a discussion, as I feel it is of vital importance and the papers are very helpful to me and I feel will be to all the readers of your excellent magazine.

**Barnet E. Bonar** \* (718 Boston Building, Salt Lake City, Utah)—Diagnosis during the preparalytic stage, although oftentimes difficult, is essential if the child is to be given the benefit of serotherapy. To effect a diagnosis one must be alert to note certain symptoms, regardless of the insidiousness of the onset or the variability in temperature. The history usually of an upper respiratory tract infection followed by drowsiness, which is interrupted frequently by complaints of headache and pain in the muscles of the neck, back or legs, together with evidence of sensitiveness of the skin to touch, pain on passive motion, excessive perspiration and marked irritability when disturbed, are sufficiently suggestive of acute anterior poliomyelitis to warrant a diagnostic lumbar puncture. If exaggerated reflexes are present it is imperative that a lumbar puncture be performed. While the onset is often sudden with high fever, headache, vomiting and diarrhea, it is not uncommon to find the disease ushered in gradually with a relatively low fever and relatively few acute symptoms.

The pain and tenderness in the muscles of the back and legs are often suggestive of muscular or articular rheumatism, but one should not be too eager to consider it as such, particularly when localization about the joints cannot be made out. It is interesting to note how often rheumatism must be thought of early in the course of the disease. Frequently the leukocyte count will be helpful, for in infantile paralysis a low count or leukopenia is common.

The symptoms and physical findings enumerated in the first paragraph cannot be considered pathognomonic of infantile paralysis, for early there is no one group of findings that may be considered as such. However, when these findings are present, examination of the cerebrospinal fluid will be of great value in ruling out most of the considerations, save tubercular meningitis. The history of exposure to tuberculosis, of failing health together with severe headache, great prostration and coma, or at least extreme somnolence, are found in tubercular menin-

\* **Barnet Edward Bonar** (718 Boston Building, Salt Lake City). M. D. Rush Medical College, 1918; B. S. University of Wisconsin, 1916. Graduate study: Cook County Hospital, Chicago, 1918-19-22. Present hospital connections: Attending pediatrician of Salt Lake County Hospital; attending physician of Holy Cross Hospital, Salt Lake City. Scientific organizations: Salt Lake County Medical Society, Utah Medical Society, A. M. A., Diplomate of National Board of Medical Examiners. Practice limited to Pediatrics-Obstetrics since 1923. Publication: "Clinical Pediatrics," Volumes II and III, published by D. Appleton & Co. (in association with Dr. C. G. Grulee); eight scientific papers chiefly on pediatric subjects.



gitis, whereas, in infantile paralysis there usually is a history of good health prior to the onset of the disease, the headache is not acute, and while mild somnolence is the rule, the child's sensorium remains unclouded.

The abortive cases and the mild ones are extremely difficult to differentiate, but early recognition or at least early isolation of them would undoubtedly reduce the frequency of the disease. It seems only logical to suggest that when there is any doubt the patient should be considered poliomyelitis until proved otherwise, in order to insure safety for the other children in the community. The mild sporadic cases are the ones that breed epidemics and of necessity require an early diagnosis if epidemics are to be stamped out.

In spite of all this discussion each and every one of us will continue to make our mistakes in diagnosing acute anterior poliomyelitis, for it is without doubt a most difficult disease to recognize early; but if we are able to lessen the number of our errors through this discussion we may feel that it has well served its purpose.

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**Teaching of Tropical Medicine**—The objects of a medical school, says Alfred C. Reed, San Francisco (*Journal A. M. A.*), are twofold. The first object is to train sound general practitioners in the art and science of medicine. The second is to select students not of higher, but of special, aptitude for careers in pure science, in research and in teaching. For the practice of medicine in most parts of the United States in the coming decades, a fair knowledge of tropical medicine is a necessity. For the research student and teacher it is even more a necessity because of the great problems of prevention and control that await solution today here in our own country. Only a fair beginning has been made. Another angle of the same matter is that without a systematic acquaintance with tropical medicine, the student planning a research career is handicapped by his lack of full survey of the field of prevention and control of disease, and therefore cannot make the best selection of the direction in which he will apply himself. The plentitude of opportunity in research in tropical medicine is receiving more and more appreciation in this country, and it is only fair that medical students should know the opportunity and that scientific research should receive the advantage of recruiting new workers in this field. The contents of a course in tropical medicine in an American medical school will naturally depend on the general educational objects of the school. It may vary from a full department with a full-time professor at its head to a series of occasional lectures, optional or cultural in their purpose. The type of physician the school aims to produce and the medical needs it aims to fulfil for its students are the deciding factors in the allocation of time and the selection of subject-matter. Most of the southern schools devote definite attention to tropical medicine. Several of the older, larger, better-known schools have developed full departments as at Tulane, or separate schools of tropical medicine and public health as at Harvard and Johns Hopkins. Most are represented by single courses in tropical diseases, and these are given when clinical material is available. The trend toward increasing the time allotted and toward recognition of the subject as such is definite. In several schools graduate courses are offered or a short, intensive, full-time course. Tropical medicine is being found an important element in the training of medical students in the United States, and many physicians are realizing a need for postgraduate instruction in it. Undergraduate instruction can be fitted into the present curriculum by a different emphasis and classification at small additional expense of hours. The general practitioner in most parts of this country needs such instruction. The development of commerce and travel is opening lines of medical work where such instruction is a necessity.

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We think in generalities, but we live in detail.—Alfred North Whitehead, *Atlantic Monthly*.

**Sanitary Officer and County Health Work**—E. L. Bishop, Nashville, Tenn. (*Journal A. M. A.*), points out that rural health work has two basic differences from urban health work. Personal relationships in rural health work are more intimate, the health worker being subjected to much closer scrutiny than is the case with urban workers. The second difference is concerned with finance. In the first place the assessed valuation of rural areas is lower than is the case with cities, and, in addition, appropriating bodies of rural governments have not yet begun the appropriation of very large sums per capita for the protection and promotion of the public health. In a study of eighty-eight full-time county health organizations in operation throughout 1925, and serving nearly 4,000,000 people, it has been shown that the total budgets represented a per capita tax of 32.4 cents. It is fair to assume that expenditures from county funds do not exceed three-fourths of the total budgets. In the selection of counties for full-time county health departments, we have usually thought of 50 cents per capita as being a suitable expenditure; a budget of \$10,000 per annum as the desirable budget for a unit of four persons, and a county of approximately 20,000 persons as a suitable unit for operations. If adequate protection of the public health is essentially concerned with personal relationships, obviously some form of full-time health service must be provided for each political unit of government, as the unit of health organization, though this need not mean that all the personnel of a unit of health organization must confine its activity to an individual political unit of government. Faced with the necessity for providing this service, and at the same time confronted with the difficulties of financing rural health work, what, then, is the solution for the rural southern county of less than 20,000? In some areas, considerable advance has been made by use of the public health nurse in the development of a local program, the principal parts of which are concerned with that phase of preventive medicine commonly termed personal hygiene. In some other areas it has seemed proper to begin with the environmental sanitation phase of the local health program, with the sanitary officer considered as the logical agent. The latter plan has several advantages, adapting it for use in many southern counties. In the first place, it deals with some of the fundamentals of rural health work, since the sanitary officer may devote most of his activity to the prevention of soil pollution, protection of water supplies, and certain parts of a malaria control program. Adequate supervision, under a well-trained personnel, is a prime essential to success, for without such supervision there will be a surer tendency to degeneration of the program into inefficient activity than will be the case with county health departments. In addition, financial co-operation by the state is necessary, not only as a stimulant to increased local organization, but also as a stabilizing factor and a measure lessening the danger of unwarranted interference by local political considerations.

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**Collateral Circulation in Thromboangitis Obliterans**—Roentgenograms of vessels in thromboangitis obliterans injected with bismuth oxychloride reveal an extensive collateral circulation, and indicate that gangrene in these cases is due to the inability of the collateral circulation to keep ahead of the advancing thrombus. Dean Lewis and F. L. Reichert, Baltimore (*Journal A. M. A.*), assert that an attempt may be made to hasten the development of a collateral circulation by division of the femoral artery just distal to the origin of the profunda femoris. Division of this artery throws out of function the principal arteries involved in the chronic inflammatory process. That thromboangitis obliterans does not interfere with the development of a collateral circulation is indicated by visualization of vessels in these cases. The early and practically complete relief from pain following division of the femoral artery, as in one case cited, suggests that spasm of the artery may be an important factor in causing pain, and that throwing out of function of the arteries principally involved in this process may be an important factor in relief of pain.

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We need less coddling of prisoners, more sympathy for victims and less for the criminals, less talk about the irresponsibility of confirmed criminals, more even-handed justice and less mawkish sentimentality.—Nebraska M. J.

## EDITORIALS

### HEALTH DOLES

The illuminating and undisputed fact that Britain's unemployment dole is producing increasing numbers of persons who prefer the dole without work to work without the dole has spread to beneficiaries under the health insurance law where the increase of malingering has alarmed Mr. Neville Chamberlain, Minister of Health, who announces that the drain on the insurance funds has increased a million pounds during the last three months. He warns that the danger from malingerers "who by constant visits and complaints, urge reluctant doctors to give them certificates of incapability to work," and the tendency of others "to magnify minor ailments and claim sickness benefits" may have to be met by tightening up of administration regulations.

Evidence, none the less significant, with its roots in the same social quagmire, is supplied in the United States by the increasing number of people who complacently accept "free" government help as a satisfactory substitute for thrift, self-reliance, and personal independence, once considered a fundamental element of self-respect and a requisite of good citizenship.

This is not, as so often stated, so much a physician's problem as it is a community, state, national and world problem. The maximum swing of the pendulum is individual responsibility, thrift, and self-reliance at one end and communistic overlordship with submergence of the individual at the other end.

True, doctors are intensely interested somewhat in a personal way, but particularly from the point of view of public welfare. As individuals they are perhaps more interested than members of other callings in the same boat because health is and always has been the great experimental field of socialistic movements. Equally interesting is the fact that when socialism or communism breaks, as it always does when it reaches certain stages, the health field is one of the first to be restored to a semblance of sanity and order. Witness communistic Russia, where having drunk the bitter dregs of communistic overlordship to an extent never before recorded, we see signs of returning sanity, one of the first and most hopeful of which is what appears to be an intelligent effort to restore medical and health agencies and services on an intelligent foundation.

They haven't traveled far on the return road, but they are headed again toward safety, while some other countries continue on the out trail.

Sugar-coated health doles of many shapes, varieties, and sizes are the energizing traffic power on the out trail. The sugar coating is thick and sweet to the novice, and a paternalistic government who supplies them will continue popular until the bitterness which is the substance of the thing begins to filter through, as it is now among people just ahead of us on the road we are traveling.

### THE DOCTOR'S LIBRARY

In no other way is the broadening of medical knowledge and service being more clearly demonstrated than in the widening scope of medical literature.

The conventional walls around doctors' libraries are being broken down; those who formerly were almost exclusively medical publishers are printing and promoting books dealing with every phase of life, and outside publishers are invading the field of scientific medicine. This is encouraging, even though it is making progress by returning to conditions of other days.

Many books most useful to the physician of today are not published by what are known as medical publishing houses, and many of the books most serviceable to physicians published by these houses are not what a few years ago would have been classed as medical books. A similar broadening is noticed in both scientific and popular periodical literature. Much current information of value to physicians is appearing in increasing quantity and variety in the better class non-medical magazines, and the most useful medical periodicals accept material that only a few years ago they would have scorned to publish.

The crumbling of these walls, the breaking down of hypothetical distinctions between doctors, patients and other average citizens is wholesome and promises to advance the cause of personal and public health and to add new values and responsibilities to the service man of health.

It's the person who needs the doctor's attention and not the disease or the "case." That more and more doctors are treating diseases and complaints less as abstract troubles and paying increasing attention to the needs of the individual—the personality—as a whole and applying remedies and advice based upon broader understanding of life and its normal and malfunctions as they bear upon the individual as a whole is a fact destined to add a new chapter to medical progress.

Rapidly accumulating, widely published results of carefully made examinations are showing that there are few, if indeed there are any, individuals entirely free from defects and infirmities that cry loudly for relief. The doctor who devotes his whole energies to discovering and ameliorating these defects in their early and correctable stages has an exceedingly promising future.

### WHO PAYS THIS DEFICIT?

It is quite generally known to hospital executives that the rates paid by state and private insurance companies for service to their policyholders is less than the cost of the service to the hospitals.

In California the charity thus given to both state and private industrial insurance companies absorbs a considerable proportion of the funds donated by the public under the impression that they are assisting in a worthy service to the poor.

CALIFORNIA AND WESTERN MEDICINE has invited attention to this wrong a number of times without producing any apparent result locally. Now others are taking up the subject, and it is only a question of time until insurance companies will be required to pay legitimate hospital costs, and funds



given by individuals and organizations to benefit the deserving poor may all be devoted to their legitimate purpose.

An illuminating editorial (*Modern Hospital*, May, 1926), concludes a discussion of this subject by saying:

"From these reports it may be seen that most hospitals are not receiving full amounts from industries or insurance companies for hospitalized cases. Whether industry, the state compensation fund, or the hospitals themselves are at fault, is difficult to determine. From the wide range of charges it seems that the first step would be to obtain some logical basis of charge upon which payment can be computed, and then to take concerted action as advised in one letter. Local conditions and personal elements enter into many of the cases, and superintendents are often powerless to make changes. But where a superintendent is accepting payment far below cost, knows that the payment is far below cost and that it is obtained from corporations well able to pay at least cost, and where there are no local conditions to render this payment just, he is keeping from the poor of his community proper treatment and is obtaining money from his contributors under false pretenses. People like to contribute to alleviate the sufferings of the poor, but there is yet to be discovered the man who will go down into his pocket to contribute \$10 to help the corporations to get cheap hospitalization for employees who need this care."

### HEART DISEASE

That there are fashions in the naming of diseases as in dress and other group customs, is easily established by anyone who cares to examine morbidity and mortality statistics.

Within certain limits and for certain classes of infirmities, little harm may be done by following fashions in diagnosis, but when the diagnosis of the moment is given because it may satisfy patients and their friends and in lieu of careful study by the physician, great harm may ensue.

"Heart disease" is for the moment a most popular diagnosis. "So satisfying to know the truth, and so honest of the doctor who is not afraid to tell it," say those persons who like to discuss their troubles and who when previously heard from were fashionable with some other equally indefinite labeling of their affliction.

Physicians, above all others, should avoid becoming confused by the numerous moving spotlights of health education flashed here and there by numerous groups and which confuse rather than illuminate the vast areas of darkness which surround the causes and consequences of disease.

Cardio-vascular diseases, including heart diseases, are and always have been extremely prevalent, serious and important, and intelligent well-directed health and medical education is also extremely important.

But that we are making progress by substituting diagnosis of heart disease for senility, old age, the cirrhoses, degenerations and many other formerly acceptable diagnoses, so obvious in changing mortality statistics, or that the heralding of these new sta-

tistics as progress in health education instead of just motion, as they are in part, is open to question.

Cardio-vascular diseases probably are increasing, at least in proportion to the increasing strain and stress of living characteristic of our times, and which is fast enough to be disturbing. Naturally also with the increasing intelligence of physicians, a higher percentage than formerly of these and all other diseases are being recognized for what they are. But isn't there a danger that the focusing on the heart of too much light through highly amplifying lenses may increase the density of the shadows beyond the limited field? Superstition and fear complexes are at their best in the shadows of ignorance. Malfunctioning of the heart is an extremely prevalent manifestation of a large variety of diseases and its actual disease a frequent consequence of many diseases, but primary disease of this vital organ as careful students are pointing out is nothing like as frequent as we are being invited to believe.

A prominent physician who devotes much of his time to a study of cardio-vascular diseases considers that his most difficult problem is to make growing numbers of patients realize and appreciate that there is nothing seriously the matter with their hearts.

Perhaps we do not always realize what a profound impression a diagnosis of heart disease makes on the patient—so profound that it is often difficult to convince them that there are forms of heart disease which are compatible with long and active life. Should we not therefore be cautious in hanging over our patient a dark shadow that it is much easier to invoke than to dispel? Would we not serve patients more wisely by making a diagnosis of heart disease only on decisively positive evidence instead of sometimes playing for safety at the expense of the patient's peace of mind?

It must be admitted that there are doctors who cannot or do not take the trouble to obtain and judiciously evaluate all the evidence as to whether the patient's symptoms are produced by genuine heart disease or by something else. It is safer for the careless doctor or the one who doesn't know to give the disease, rather than the patient, the benefit of the doubt. Then, of course, there is the group of near-doctors out for the money, who see more profit in slowly curing the heart disease that never existed than they do in the honest practice of a beloved profession. The wave of fear of heart disease now so widely prevalent as a result of well-intentioned propaganda has provided all sorts of cultists, cure-all vendors and unscrupulous quacks with a harvest that they are not slow in reaping.

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Too many of us are inclined to look upon the opening of school as a welcome relief from responsibility in the care of children. There's danger in that point of view. We cannot depute the training of our children to strangers. Nor will anything take the place of home training. . . . Discipline makes the man, honor makes the gentleman. But it is in the home that habits of discipline are formed. And a sense of honor grows in the family circle. School is the agency by which learning is attained, but home is the place where character is made.—Editorial, *Dearborn Independent*.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

We are delighted to see by the papers that the movement to replace the useless and depressing influence of "long lines of white beds, unbroken ugly walls, and the disagreeable odors of the traditional hospital ward," with more attractive, restful and comfortable allocation of space for institutional victims, has been taken up by the army.

If other government "hospitals" will only add their influence, this inexpensive addition to the welfare of the sick, injured and shut-ins, soon may be what it should have been for many years.

It doesn't cost any more to accord the sick in hospitals the ordinary privacy and common decencies demanded by healthy people than it does to serve them a la stockyard fashion.

The full-fledged physician and surgeon of today in America and Europe must of necessity be a most extraordinary person. One wonders that the human brain can contain all that the doctor of the present day must know.

If we were asked to say which class of men in the world we consider most useful—which class of men have blessed humanity to the greatest extent, excepting the ministers of religion—we would unhesitatingly name the doctors.—John S. McGroarty, Los Angeles Times.

"Dr. Mariana Bertola, president California Federation of Women's Clubs, prefers to rely upon public sentiment rather than upon legislation in caring for 'California's most important crop'—her children. What is grandmotherly legislation for adults is apt to be stepmotherly for children."—This editorial from some newspaper was sent in by an unknown correspondent.

The Women's Clubs will add a bright star to their diadem when they succeed in having established a decently clean, well-conducted children's department for the little ones of indigent parents, in every county hospital in California.

It is a big job, and an important job. Of the some forty such hospitals not over a half-dozen now have such space and corresponding service.

Recently the Chicago daily papers carried Associated Press dispatches showing that some of the ringleaders in the Hoxide Cancer Cure at Tayloryville had been arrested for fakery and fraudulent transactions in connection with the exploitation of the cure. It is reported that even the United States Government has taken a hand in the matter by entering prosecution for using the mails to defraud. Thus another quackery bubble is burst, but there will be more to take its place, for a sucker is born every minute, and as long as there are victims for the faker there also will be fakers to prey upon them.—J. Indiana M. A.

There is something to think about in a report of the census bureau to the effect that inmates of mental disease hospitals have increased nearly 300 per cent in forty years.

At the present rate only citizens on "parole" will be at liberty in a few generations.

Recent studies in the causes of mental deficiency

seem to indicate the utter futility of sterilization or education as preventives.

However, mental defectives above the zero of intelligence can learn something, often enough to escape dependency, and that something they should have.

"What Price Syphilis," is a favorite topic for writers these days, and well it may be. Syphilis is, and for ages has been, the greatest morbidity-producing disease affecting mankind.

The statements of long since dead masters, to the effect that he who knows syphilis knows medicine, and that control of the disease will eliminate the greatest of all scourges, are still true today.

What are we doing about it? Not much. What can we do about it? Quien sabe.

Smallpox, rabies, diphtheria, typhoid, are surely, easily and inexpensively preventable. All people who read even newspapers know this, and yet these dreadful pests continue to take their toll among even intelligent people. Whatever the answer may be, it no longer may be lack of information.

If health education fails in simples, can it promise more in the expensive or less well-understood phases of disease limitation?

There is a lesson to be learned from the distressingly low birth rate among women gainfully employed. There were 8,500,000 women gainfully employed in 1920, of whom two million plus were married. The number doubled in the thirty years from 1890 to 1920.

If the current rate of fall in births continues, we will be compelled to substitute Birth Booster Leagues for Birth Control Leagues.

Ever since Sir Walter Raleigh's servant threw a bucket of water on him when he was enveloped in a cloud of tobacco smoke the controversy concerning the effects of tobacco has existed. Moreover, judging from the progress which has been made toward a solution, it will continue to exist for some time to come.—International Medical Digest.

It is here laid down as a postulate that a doctor appears in the lay prints in direct ratio as he seeks such advertising, and inversely as he discourages it.—South. M. and S.

The era of unrest has invaded the field of medicine. Everyone seems to be looking for trouble. No one can rest easy unless she has had a "thorough examination." The phrase "periodic health examination" is crowding out the old phrases, "psychoanalysis" and "inferiority complex." School teachers, who begrudge \$3 for a doctor's midnight call to determine whether their abdominal pain means too much ice cream or a rupturing appendix, are falling over themselves to pay \$20 to have their "lives extended." There is confusion in it all. Many of the examinees feel that the examination itself will extend their lives, and the longer the examination the longer the life.—Donald S. King, Boston M. and S. J.

It is usually a doctor's reputation that makes him great, and it isn't what he knows, but what he can make others think he knows that gets him his reputation.—J. Kansas M. Soc.



**Angina Pectoris and Pseudo-Angina**—The material for this study was summarized by Eugene S. Kilgore, San Francisco (Journal A. M. A.), from the records of 253 patients complaining of pain in the region of the heart or, in two instances, pain elsewhere which was thought to be related to the heart or the aorta (stinging effort pain in both wrists with syphilitic heart and aorta, and viselike effort pain in the back in a case of hypertension angina). Pain obviously due to pleurisy, herpes, etc., is not included. Most of the cases were readily classifiable into three main types: (1) lancinating, (2) dull, and (3) compression pain. Lancinating pain greatly predominated (136 cases), and with few exceptions was in the precordial region; dull pain comes next in frequency (114 cases) and was also mostly precordial, but not infrequently substernal; and compression pain, while distinctly less frequent in general (forty-five cases), predominated in the central chest location, and was about equally common in the precordia. Of the total number of cases (253) the circulation was normal in 100. There were thirty-six cases of angina pectoris among the 153 cases of circulatory disease. The small angina group was conspicuous for its paucity of lancinating pain. Only one of the four instances was unassociated with other types of pain. On the other hand, the angina group nearly monopolized the compression pain, especially under the sternum where seventeen were angina, three other types of circulatory disease, and three "normals." Lancinating pain was about equal in frequency in the "normal" and general pathologic groups; but when the group sizes are considered it was relatively more common among "normals": 66 per cent of "normals" and 44 per cent of the general circulatory disease group. Dull pain occurred in 42 per cent of the "normals," 53 per cent of the general circulatory disease group other than angina, and in 28 per cent of the angina cases; but, whereas the location of this pain in the angina group was nearly equally divided between sternum and precordia, the others show a strong predilection for the precordia. From these descriptions of pain types and their locations, it appears that in a given case, when the question of angina is raised, the quality, timing and topography of the pain often furnish strong presumptive evidence. Other important data to be derived from histories relate to pain radiation, exciting causes, means of relief, etc. Among fifty-three instances of radiation in the whole disease group lancinating pain at the point of initiation occurred fifteen times; dull pain, seventeen times, and compression pain, twenty-one times. All but one of the thirty-six angina patients recalled definite and usually constant and immediate relation of physical effort to the onset of pain (two instances of lancinating pain; seven, dull; twenty-six compression); six of them also recognized mental excitement as an immediate cause of pain (two, dull; four, compression pain); and twenty-three were conscious of being more susceptible after meals (four, dull; nineteen, compression). Only one thought that his pain (dull) was more likely to occur some time after completion of effort. The figures in this analysis suggest that possibly dull pain is less commonly a sequel of effort in the non-angina pathologic group than among "normals"; that mental excitement is more often followed by all types of pain in the general pathologic group, and that these "normals" are more prone than others to experience delayed association between effort and dull or lancinating pain. During attacks of angina it is quite common for the patient to feel "as if the wind is cut off" by the constricting sensation of the pain, or he may breathe naturally or may expand the chest in an effort to relieve the pain. On the other hand, patients in the other groups, when they describe any respiratory relations to the pain, usually say they hold the breath for fear of increasing the pain. Palpitation in the sense of consciousness of heart action independent of exercise or excitement, extrasystoles, and the like, was noted in 25 per cent of the angina cases, 51 per cent of the remaining pathologic group, and 53 per cent of the "normals." Cutaneous hyperesthesia or hyperalgesia was noted at times in all groups, but most cases were seen some time after attacks. Means of pain relief were the usual ones in the angina group (cessation of effort, nitrites); in the others, general regulation of rest and exercise, psychotherapy and bromides.

## MEDICAL ECONOMICS AND PUBLIC HEALTH

With a letter commending our editorial (September issue) on the hospital crisis in England, Dr. Truman O. Boyd, chief of staff, St. Mary's Long Beach Hospital, supplies a copy of a recent address, from which we extract:

"Shall we, the public, take over the entire hospital system, operate it as another feature of government and support it by perpetual taxation, or will we encourage the hospital development on a competitive business basis? This is a serious question confronting us today.

"Already our supposedly strictly charitable institutions are receiving patients on a part-pay basis, many of whom are amply able to pay for the best of care. Placing the private enterprise in direct competition with a public institution whose deficiencies are met by taxation and taxing a private enterprise to support its competitor—what could be more absurd?

"To my mind there can be but one answer if we hope to keep off the rocks and that is, to encourage the hospitals on a competitive business basis and support them with such private endowment as they are able to command by the character of the work done.

"And such charity as is extended should be extended through these institutions, whether of public or private nature, in proportion to the needs of the individual.

"There is no escaping this issue. If we are to tax ourselves for an occasional hospital and its support, or continue to receive pay patients at our public charity institutions in competition with private business, we will ultimately destroy a private business which is well established and invite for ourselves inevitable disaster in a perpetual burdensome taxation.

"If pay or part-pay hospitals are to be built or supported in whole or in part by public taxation in order to reduce the cost of hospitalization, then why would it not be good charitable public business to support drug stores, groceries, dry goods, etc., by taxation, all of which supply necessities for the sick?

"The fact is that in our desire to be charitable we cease to be practical.

"There is not too much charity; there is too much misdirected charity. The best way to help the individual poor or the poor as a class, is to help them to help themselves.

"There is no other form of charity so laudable as charity extended to the destitute sick. No other appeal for financial assistance receives such ready response.

"These facts are well known and taken advantage of in soliciting aid for various organizations working under different titles of social welfare, numerous and confusing, some of which perform a very useful function and some of which do little more than furnish salaries for a staff that delight to bask in the limelight.

"It is to the semi-endowed charitable institution that we are indebted for the present state of development of hospitals.

"They are competitive organizations and through these institutions public charity hospitalization should be extended in proportion to the individual needs, because it is a well-demonstrated fact that it can be done with greater justice to the individual and at far less cost to the public."

In discussing the family physician's place in the inspection of school children (J. A. M. A., September 18), Dr. Mary Evelyn Bryden asks the interesting question, "Why should a physician be expected to move his workshop to a lay workshop and there, either for pay or without pay, either with poor equipment or with none, be expected to prostitute a scientific knowledge and ability to an efficient, unscientific, hasty, incorrect procedure called 'medical' only because it is performed by a licensed physician? Every physician knows that the so-called medical examination as performed in the average school room is a delusion and a folly. It is not an examination. It is a

bare inspection. Better than anyone else, the physician knows how nearly it is worthless."

Most practicing physicians will endorse these statements, and all of them know they are true.

This illuminating comment (J. A. M. A., September 18, p. 953), reveals interesting trends in bureaucratic medicine in England: The council of the National Medical Union, an association of physicians opposed to the panel system, takes exception (1) to the proposal to set up a tribunal composed of three physicians and one legal assessor to deal with cases of infringement of the regulations, instead of these cases being dealt with, as at present, by the ordinary courts; (2) to the proposal to empower the home secretary to withdraw from physicians found guilty by the tribunal the right to possess and even to prescribe dangerous drugs, such penalty having the effect of making it impossible for such physicians to continue in practice; (3) to the proposal to make the home secretary the final authority without right to appeal to the courts of law, which proposal is contrary to the basic principles of British justice; (4) to the proposal to place on non-dispensing physicians the obligation of keeping records of their purchased supplies of the dangerous drugs, on the grounds that the properly made out prescription or order, which is retained by the wholesale or retail chemist, contains all necessary information and is sufficient safeguard. The union holds that the attempt which is being made in various directions to bring the members of the medical profession under bureaucratic control must be resisted; otherwise the profession will become pawns in the hands of officials and government inspectors.

It is the duty of the physician, says the Detroit Public Health Department, to care for the health of the school children. The first step in this care is a careful examination. The Health Department is attempting to stimulate an interest in the examination of school children by their own private physicians.—Bull. Wayne Co. Med. Soc.

A lot of people have felt for a long time that something was being overlooked or ignored in the "statistics" being fed from a government bureau to the effect that childbirth hazards are greater in the United States than in most other civilized countries; but it is only recently that anyone has bothered to look up data and openly question this propaganda paid for out of taxes:

John Howland, pediatrician in chief, Johns Hopkins Hospital, Baltimore, a conceded authority in the medical and hygienic care of children, said:

"I am quite sure, from considerable experience with statistics, that there is no basis for the statements that the United States stands seventeenth in the maternal death rate. Even civilized countries have not sufficiently accurate statistics to enable anyone to make a definite statement such as this." (House Hearings, United States Congress, 1921, p. 270.)

Again, the Vital Statistics Division of the United States Census Bureau, the only real statistical bureau we have on this subject, says in its latest report, *Mortality Statistics*, 1923, p. 61:

"How do the death rates from puerperal causes per 1000 live births in the birth registration area of the United States compare with the rates in foreign countries? Here again is a question of the greatest interest and importance which cannot be answered satisfactorily, both because of lack of data in this country and because there is no certainty that all deaths from these causes are classified in the same way in these various countries."—George Madden Martin.

So that's that!

Many private health agencies are following out policies decidedly inimical to the future good of our social organization. They have gone too long and too far without competent direction and control. They need to pause and take stock of their policies and their objectives before they become too firmly committed to a course of action. Many bizarre theories are being pushed and many doctrines contrary to our traditions are being promulgated. I would not stifle progressive thinking, but I would suggest adequate control in the functioning of some of the

newer social forces that deal with health problems.—F. L. Rector, Editor The Nation's Health.

Motion pictures have become such a useful and important part of patient's records—particularly surgical records—that the Schwabacher-Frey Stationery Co., 735 Market Street, are now advertising the Filmo Automatic Motion Picture Camera to doctors and hospitals through our columns.

Among the doctors in San Francisco alone who get both pleasure and profit from these compact little instruments are: G. H. Juilly, M.D., 133 Geary Street (French Hospital); B. F. Alden, M.D., 1195 Bush Street; George Warren Pierce, M.D., 490 Post Street; Elbridge Best, M.D., 384 Post Street; W. Edward Chamberlain, M.D., Lane Hospital; Robert R. Newell, M.D., Lane Hospital; H. C. Warren, M.D., 384 Post Street.

You will help your magazine and a good movement by mentioning this advertisement when you call to look at these instruments or write for literature and information.

"Why should not our 15,000,000 insured persons be entitled to the fullest medical and consultative skill which at present can be got by the rich man who pays for it in Harley Street?" asked Sir Walter Kinnear, controller of the insurance department of the British Ministry of Health, in a public address. "We want," continued the speaker, "clinics throughout the country; we want places where the general practitioner and the specialist will meet together with a view to diagnosis and treatment; we want domiciliary visits of specialists and consultants in the homes of the people who are unable to travel to those clinics. One of the most disheartening things," Sir Walter concluded, "in the administration of the Insurance Act was the large sum of money spent every year on drugs, amounting to between two and two and a half millions. There was a great wastage of money on drugs, and unless there was some diminution it would be necessary to make efficient administrative arrangements which would tend to check expenditure. He was convinced that timely treatment in convalescent homes would be of more value than all the drugs in the British pharmacopoeia."

Coming from such a prominent source, this statement contains food for serious reflection for everyone interested in the rolling barrage of socialized, or governmentalized, medicine and health.

Dr. W. W. Goodrich of San Jose sends us an editorial clipping from the "West Side Advance," a Fresno County weekly, from which we quote:

"The position of the country town doctor is not an enviable one. Once the place was sought by young medicos, but that was long ago, indeed. Today it is difficult to fill the position if the incumbent dies or moves away.

"What are the things that tend to keep a doctor in a community? One of the most important is that bills be paid promptly. The opinion seems to be general that physicians make a great deal of money. This may be true of specialists in a city, we do not know, but very few doctors in the small towns make even a decent living. Patients use their skilled services to the limit and then try to get out of paying, or delay paying just as long as they can. They pay the butcher, the baker, and the candlestick maker first, and the physician last, or never."

After further amplification of his theme, Editor F. I. Drexler concludes with the advice:

"Appreciate your local doctor. Use him, and use him right. Get his services when needed and pay him promptly. Then in the time of need in your own home you will gladly welcome the man of science who by the promptness of his response, may be the means of saving the life of a loved one."

New York County Medical Society makes the following interesting recommendation regarding radiological laboratories:

1. The director of each x-ray laboratory must be a licensed physician, shall apply to the County Medical Society for a certificate, and shall submit the evidence of



approval of his x-ray laboratory by the Department of Health of the city of New York.

2. Since the practice of roentgenology is a branch of the practice of medicine, the physicians conducting x-ray laboratories shall conform to the code of ethics binding on all members of the profession. This prohibits the giving of a discount, rebate, commission, bonus, contract practice, or any other division of fees.

3. Advertising in periodicals or by means of circulars should, in the interests of the public welfare, be limited to professional cards in medical publications. Professional cards may state the name, address, office hours, telephone and operator's activities in a fashion similar to that practiced by other specialists.

4. The use of a trade name for designating x-ray laboratories directed or owned by licensed physicians is a violation of the Medical Practice Act.

The annual report of the Surgeon-General, United States Army, to the Secretary of War for the year 1925 divulges the information that the average number of patients in army and associated hospitals each day during the year 1925 was 6262, of which 30 per cent were beneficiaries of the United States Veterans' Bureau.

The total cost of this hospitalization, including repairs to buildings and such slight additional construction as was done, and the maintenance of roads, walks, and drives was \$4.95 per patient per day or 33 cents below the cost during the preceding year.—The Modern Hospital.

Recently in discussing with the people of Hayward (California) some of the problems of organizing, building and operating a small hospital, Howard H. Johnson, director of Saint Luke's Hospital, San Francisco, gave some sound advice of importance to all persons and organizations interested in developing the splendid movement for more and better small hospitals.

Johnson said: "Hospitals are pretty much like watches. When one looks into a small watch he is pretty sure to find as many wheels and nuts as he will in a large one. These small wheels and nuts naturally require more delicate balance, oiling and care than the large ones do. They are closer together and may develop friction. The small boy when he has a watch usually carries a turnip. The small community frequently has a turnip hospital, but if the analogy carries and some one wide-awake person will wind and set the turnip as carefully and as often as the boy does his turnip, it will do more accurate work than those \$1000 Swiss watch hospitals that are never cleaned, set or wound up. So you see I view the small hospital question with a great deal of respect.

"In general terms, it may be said that the small hospital should be as modern and scientific as a large one and that inasmuch as each community has its own particular problems, ideas, and ideals the hospital will have to be adapted to and made to meet these particular demands scientifically, sympathetically, and specifically.

"It goes without saying that the house and hotel side of the small hospital should be as clean, comfortable, and homelike as funds will permit, and there are volumes in this one word 'funds' if we could have time to discuss it. The hospital side should include adequate operating, x-ray, laboratory, physiotherapy, records, admission and office facilities. I mean by adequate just a little bit ahead of actual demand. That means growth. In large hospitals we have a professional staff, supervisors, technicians, full and part-time doctors, and trained clerks for each of these departments. All of these are not available; in fact, few of them are usually available in small hospitals chiefly on account of the cost. This subject 'personnel' is the mainspring. Properly trained, sympathetic personnel, though inadequate, in numbers, with the urge to serve sick people can take over a barn, a barrack, or a tent and turn out cured improved and grateful patients. Where the other kind of personnel working on the daily grind 'pass the buck' principle where the word 'institution' has crowded the word 'hospital' off the stationery will turn out saddened, unimproved patients. The individual in the small hospital will have to be exceedingly versatile and energetic, and because of the fact that he will come into more intimate and frequent contact with the patients, he will in all probability be more sympathetic and appreciative of what it is all about than the indi-

vidual in the large hospital. In either large or small hospitals much depends upon the balance wheel—manager, director, or owner. The balance wheel is responsible for regular, accurate, continuous performance and, come to think of it, who ever heard of a watch with two or three balance wheels? Right here we frequently find a loose screw which may slow up or stop the wheels. If the town plasterer receives \$18 a day, why should 'X,' who is operating-room supervisor, laboratory and x-ray technician receive \$3.50 a day? Do you, or the prospective patients who insist upon aseptic surgery, accuracy in laboratory procedures and twelve hours a day, expect weak human nature to supply *all* the people now demanded for hospital work at so much less than is given in other work and with the privilege of working in the hospital as a bonus? If you haven't thought of the possible applications, ramifications and possibilities of this subject it would be well to think; if your people haven't thought, educate them. Have them study the room rates in the hotel, where meals, tips, porters, etc., are extra and compare them with the hospital rates with meals served in rooms and endless, highly specialized, scientific service thrown in.

"In general terms, though, a hospital will get out of a community about what it puts in. Doctors and patients will go to a hospital if there is something there that they want. Rochester, Minnesota, was a small unheard of town a few years ago, and today patients go there from everywhere.

"The good small hospital differs from a good large one in its size, the size of its various departments, but in no other way."

A baking powder concern has issued an interesting 94-page booklet purporting to explain the legal warfare that has been going on between the manufacturers who use alum in their product and those who do not.

So far as we are informed, the only excuse for using alum is in order to make a cheaper product. The "no alum" group have been so active in advertising the superior merits of their product that the opposition appealed to the Federal Trade Commission for relief from what they seemed to class as unfair advertising.

They did not get it, and the booklet explains why.

The interesting phase of this important public health question is that the decision on a health matter was made by a court apparently innocent of scientific medical knowledge.

We presume the public will continue to read of the doings of baking powder kings, particularly those somewhat puckered by alum.

Chemists are far from gaining any insight into the meaning of life, but it is not unlikely that we shall, in the near future, obtain some information regarding the mechanism of the action of the enzyme, the important agent in the nonliving transformation of living matter into chemical products. It may be that organic chemists are waiting to see how Willstätter, who has already made great progress in enzyme chemistry, will surmount the difficulties confronting him, and it may well be that this great organic chemist will introduce new methods of attack which will open up fresh fields for investigation.—J. F. Thorpe, *Science*, September 3, 1926.

Contrary to a rather widespread belief, even the complete sterilization of all our mental defectives would not be successful in ridding the world of feeble-mindedness for more than a single generation. This is the conclusion reached by "The Lancet," foremost medical and surgical journal of Great Britain, in an editorial. If these facts be so, then the much-advocated plan of some social reformers would come virtually to naught, for about 7 per cent of us are unsuspected "carriers" of feeble-mindedness, in whose children or grandchildren the latent quality would reappear. Thus the work would have to be done all over again.—*Scientific American*.

More than one-half of the civilian employees of the government, not counting letter carriers and clerks, are the most expert loafers and time-killers in America. It is the spirit of government service. Buck-passing is the favorite and accomplished practice.—Congressman Davey.

## CALIFORNIA MEDICAL ASSOCIATION

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### CLINICAL PRIZES

#### Rules for the Submission of Papers

The Committee on Clinical Prize Awards desires to call the attention of the membership to the following rules governing the submission of papers for the benefit of those who desire to compete for the 1927 prizes:

1. Any member of the California Medical Association is eligible to compete for the prizes. Any question arising as to the eligibility of a candidate or the admissibility of his essay will be settled by the decision of the Council.

2. Manuscripts must be typewritten on one side of the paper; they must be double spaced; and they must not be folded or rolled. Illustrations or charts must be marked with the title of the paper to which they belong.

3. Essays must not contain more than 4000 words. In judging a paper the committee will take into account the basic importance of the work done and its novelty; the thoroughness with which the research has been carried out; the clearness with which it has been written up; and the neatness of the manuscripts and illustrations.

4. Papers should be sent, preferably by registered mail, to Dr. Emma Pope, secretary of the California Medical Association, 1016 Balboa Building, San Francisco. They should be identified by a nom de plume or motto only. A separate envelope should be sent to Doctor Pope containing the author's name and his nom de plume or motto, so that after the award is made the name of the writer can be found. Any return addresses or distinguishing marks will be removed from the wrappers before the papers are turned over to the judges.

5. All papers must be in the hands of Doctor Pope before March 15, 1927, in order that the judges may finish their work in time for the meeting of the Association.

6. The judges reserve the right to withhold the award, in the event that no paper comes up to the standards of excellence which they feel should be set.

7. If, in the judgment of the editor of CALIFORNIA AND WESTERN MEDICINE, and the editorial councilors, the paper on laboratory research is too technical or otherwise unsuitable for inclusion in CALIFORNIA AND WESTERN MEDICINE, the prize winner will be allowed to publish it in some special journal and will be required to make an abstract for the readers in California.

8. Inquiries relative to the prize contest should be addressed to the chairman of the committee, Dudley Fulton, 1135 Pacific Mutual Building, 523 West Sixth Street, Los Angeles, California.

### ALAMEDA COUNTY

**Alameda County Medical Association**—The regular monthly meeting of the Association was held at the Ethel Moore Memorial Building, September 20, J. K. Hamilton, presiding. The program was presented by L. I. Oppenheimer, R. J. Sharpsteen, and Dudley Smith, who prepared the following papers:

"A Discussion of Three Cases of Bilateral Kidney Calculi" (L. I. Oppenheimer). The incidence of bilateral occurrence of upper urinary tract stones ranges around 12 per cent. In the Alameda County Hospital, from 1921 to the present time, one out of every fourteen of these cases has been bilateral. In the Oakland Health Center Urology Clinic for the past two years, of the five urinary stone cases two have been bilateral. These and a private case of bilateral kidney stones are under discussion. The symptoms of the two clinic cases with the enormous bilateral stones were not characteristic of renal calculi, while those of Case 3, with comparatively small calculi, were typical. The function of one of the kidney's with

enormous stone in it was nil; another with a larger stone was 90 per cent normal. It was only with the patient with the typical symptoms that a differential diagnosis had to be made. His calcified prostate, pyuria and vague kidney shadows necessitated the ruling out of renal tuberculosis, which was done by the findings of sterile kidney urine and good kidney function. Surgery was not indicated with the two giant calculi cases due to the impossibility of complete removal of the concretions without tearing the kidneys to pieces. With the case having smaller calculi, complete removal of all the stones was essential. This man, with the multiple, disseminated, inaccessible stones of the left kidney, was sent to Brash and operated upon by Hunt, with aid of the renal fluoroscope at the operating table. On his return the small calculi of the right kidney were manipulated out. Roentgenograms taken a year after these procedures showed no evidence of recurrence. Conclusions reached from the study of these three patients are: (1) Early diagnosis and treatment is essential, otherwise, among other disasters, inoperable conditions such as have occurred in Cases Nos. 1 and 2, may ensue. (2) Roentgenology in suspected kidney and ureter conditions should be a routine. (3) The possibility of manipulative removal of smaller kidney and ureteral calculi should not be neglected. (4) The renal fluoroscope used at the operating table is the surest method of complete removal of disseminated inaccessible calculi. This complete removal prevents recurrence, which accounts for the improved prognosis of present-day urinary calculi surgery.

"Prehistoric Trephining" (Jay Randolph Sharpsteen). The author has had the opportunity of examining and recording the findings on over one hundred trephined skulls from Peru, and is of the opinion that the operation in Peru was done for the relief of fracture and projected several photographs to support this. There was a remarkable amount of healing in the vast majority of trephinations, indicating that not only did the patient survive the operation, but lived long afterward. Some specimens showed one, and one showed two, subsequent operations. The ages of the individuals were mostly in middle life, and some were quite old. Males were in the majority, of about 7 to 1. Undoubted evidence of antemortem fracture was found in 45 per cent, indicating that if those cases in which all fragments were removed at the time of the operation, or those in which the healing processes had obliterated all signs of fracture, were added to this, the probable percentage of fracture would be close to 90. Pictures of specimens made by the author, and by Dr. Wilson Parry of London, illustrating the various types of prehistoric trephinations, were shown. Pictures of pottery depicting various cutaneous diseases were also shown. The assistance of Wallace Terry, Howard Naffziger, C. W. Mead of New York, Charles Singer and T. Wilson Parry of London, and Prof. Max Neuberger of Vienna, in helping secure specimens of skulls, and also manuscripts for the preparation of the treatise of which this short paper forms but a small part, is hereby acknowledged.

Dudley Smith discussed the "Importance of and the Technique of Rectal Examination." He pointed out the necessity of more attention being paid to diseases of the rectum in our medical schools, and stated that many patients are suffering from some disease, the relief of which would be assisted, or entirely accomplished, by the treatment of pathological conditions discovered only upon rectal examination. He said that many symptoms which do not point directly to this region, such as disturbances of digestion, menstruation, and the functions of the urinary organs, as well as headache, sciatica, joint pains, anemia and the various symptoms of focal infection, are often the result of diseases originating within the confines of the lower bowel, and that many diseased conditions of the rectal cavity may progress to an astonishing degree without causing any local pain on account of the lack of sensory innervation of this region. He said that no case of constipation, particularly of the chronic variety, should ever be treated until a complete examination has been made and that many cases of so-called constipation, which is thought to be purely a functional condition, are in reality due to mechanical causes. No physician, said Smith, would undertake treatment of symptoms referred, for example, to the throat or the



eye or the vagina, without direct inspection, and it is to be regretted that many patients are satisfied to keep on detailing their symptoms to their physician who, without ocular or even digital examination, serenely prescribes some suppositories or ointment, and later on is much chagrined to find that the patient does not improve. Such practice is an injustice to both patient and doctor, and meets its most tragic conclusion when cancer of the rectum is thus overlooked, until it has advanced to a hopeless state. No general examination is complete until the rectum has been examined. Doctor Smith showed the instruments he considered most suitable and explained the technique of using them, closing with an appeal to the profession to become familiar with the simple technique of rectal examination, and thus insure discovery of disease in this region which is now so commonly overlooked.

The president then introduced the new members, after which Doctor Majors read a tribute to the late W. D. Huntington.

The meeting adjourned out of respect to Doctor Huntington.

PAULINE S. NUSBAUMER, *Secretary*.



### CONTRA COSTA COUNTY

**Contra Costa County Society**—The first of the fall meetings of the Contra Costa County Medical Society was held on September 25, 1926, at the offices of U. S. Abbott, in Richmond.

S. N. Weil, secretary, of Selby presided in the absence of President McCullough of Crockett.

Clifford Sweet of Oakland gave a very instructive address on the subject of "Pediatrics." He was cordially received.

A committee of three was named by the Chair to investigate the application of L. Wuesthoff for membership. Those named on the committee were Keser, Hely, and Carpenter, all of Richmond.

S. N. WEIL, *Secretary*.



### SACRAMENTO COUNTY

**Sacramento Society for Medical Improvement**—The September meeting was held in the Gold Room of the Sacramento Hotel on the 21st, President Schoff presiding. The minutes of the June meeting were read and approved.

**Under Case Reports**—Gundrum reported the interesting occurrence of oxycephaly in one, with rickets in the other twin. In this, apparently, single ovum twin, both children were reared under the same conditions and subject to the same feeding. Gundrum pointed out the probable influence of heredity and the endocrines. Crawford inquired as to the presence of optic atrophy in the child with oxycephaly, as he had recently seen a case of this sort with marked atrophy. Gundrum's case did not have any.

Drysdale reported a case of a ruptured right salpinx plus the presence of a double right ovary. The history of this case was of a special interest, due to the fact that there had been a tremendous amount of pain referred to the right hip.

Schoff demonstrated a man showing extensive psoriasis. The interest here was the fact that we had a man who pigmented readily under light therapy and yet there was a constant progression of the psoriasis. Under glandular treatment of thymus the patient was now showing great improvement.

The principal paper of the evening was presented by J. William Crawford, now associated with Walter Scott Franklin and Frederick C. Cordes in San Francisco. He chose for his subject the "Management of Squint."

The origin of the condition was declared to be lack of development of the fusion faculty. It is highly important that we approach the treatment of this condition with the idea of preventing amblyopia rather than to obtain merely a cosmetic result. Crawford appealed to those first seeing these cases to prepare for their immediate treatment, not simply to prescribe glasses and wait, or to advise the parents "that the child will grow out of it." There are

three important measures to be adopted in treatment. First, the correction of any refractive error; second, the occlusion of the eye (while not being trained) to prevent amblyopia, and lastly, the training of the fusion faculty. Crawford demonstrated the Worth amblyoscope, reviewing the various types of slides used in this: first, those slides used for binocular vision; second, those for amplitude; and third, those of perspective. It is very interesting to note how rapidly these children improve when satisfactory co-operation of the parents is obtained. In conclusion, Crawford suggested that but a very small percentage need operating, and when this is required there are three types of operation to consider: tucking, advancement, and the Reese resection.

The paper was discussed by J. Roy Jones, W. E. Briggs, E. C. Turner, C. E. McKee, and E. T. Rulison. They referred to the importance of the immediate starting of treatment, the necessity of complete parental co-operation, and the fact that the location of an apparently definite fusion center was unknown. A question was also asked as to the status of prisms in the present therapy. Crawford responded by suggesting that prisms were no longer used, due to the fact that the defect was not in the eye itself, but in the brain.

Crawford then spent a few minutes telling us of a great number of relatively new ideas he had picked up in his last two years spent in Philadelphia. These touched upon such subjects as the injection of mercury cyanide in early cataracts; a review of the present tendencies in tonsillectomies, together with the frequent use of the laryngoscope; the waiting and subsequent "lid-lifting" methods as applied to mastoid infections; the routine x-ray examinations for the thymus gland in tonsillectomies; electrocoagulation of malignancies; the daily aspiration of secretion and membrane in laryngeal diphtheria; the use of bismuth and neosalvarsan in syphilis; the use of the Chinese drug, ephedrin, particularly calling attention to its value when used topically; the proper treatment of toxic thyroid, the value of having at one's command scores of donors immunized against various infections and, lastly, the extensive use of rectal anesthesia as well as the choice of ethylene as an anesthetic.

The application of Leonard W. Weaver was read for the second time, and a vote upon his name showed his unanimous election with thirty-two yeases.

The report of the Board of Directors referred to a number of communications, including a note from the Parkinson family expressing gratitude; a request from the secretary of the A. M. A. asking that action be taken on the report of the Committee on Medical Relief in Disaster; a letter from W. H. Miller telling of his return to Sacramento; and a note from the Los Angeles County Medical Society asking that we consider the appointment of a special state election committee.

A communication from Kurt Garve, now located in the Children's Hospital in Los Angeles, was read. Garve wishes an assistantcy or association in Sacramento.

Under new business it was properly moved, seconded and carried that the Society adopt the report of the Committee on Medical Relief in Disaster, as presented at the last Dallas session of the A. M. A.

It was moved by Hale and seconded by Johnson and carried that we take adverse action on the recommendation of the Los Angeles County Medical Society suggesting the appointment of a special state election committee.

William Ellery Briggs read the report of the Committee on Resolutions anent James H. Parkinson. It was moved, seconded and carried that the recommendation of the committee "to spread these thoughts upon our minutes as a permanent reminder of the life of one we all cherished," and that a copy be sent to the family of Doctor Parkinson, be adopted. The motion of Topping, that appreciation be voiced for the committee drawing up these resolutions was adopted.

Under report of committee, the "1928" Committee stated that they had a promising outlook. The Program Committee announced that Howard C. Naffziger would present a paper on "Head Injuries" at our next meeting, in October.

Meeting adjourned.

BERT S. THOMAS, *Secretary*.

### SAN DIEGO COUNTY

**San Diego County Society**—A steam shovel is actively at work excavating for the foundation of the new Medical Arts Building at Third and Ash streets that, with the completion of the Spreckels' Building now roofed in, on Broadway, will ease the office situation for some time to come.

On Tuesday, September 14, following the monthly dinner of the Medical Society held at the Golden Lion Tavern, the meeting was turned over to Capt. Raymond Spear, Commandant of the United States Naval Hospital, who presided while members of his staff presented a program of unusual excellence. Those taking part in the program were Doctors Spear, Miller, Garrison, Raison, Nappkamper, White, Dollard, and Satterlee. Of live local interest was the report of a recent epidemic of food poisoning following a barbecue in which eighty-seven cases were admitted to the hospital and treated without fatality. The following points about the behavior of the cases are not without interest: The average incubation period was about eighteen hours; many cases on admission were prostrated and some few in collapse; most of the cases were more or less dehydrated by reason of the profuse vomiting and bowel movements. The outstanding symptoms were headache, chills, pain in the back and legs, vomiting and profuse intestinal discharge; the temperature varied from subnormal to 102 degrees F. The treatment followed was prompt gastric lavage with solutions of bicarbonate of soda and the administration of castor oil and epsom salts for as free purgation as the patient's condition would permit. Administration of copious amounts of fluid and the relief of cramp pain with codein. Food was entirely withheld until the temperature reached normal. In connection with this report, Satterlee discussed the pathologic aspects of food poisoning in general.

On September 21, at the regular meeting of the staff of Mercy Hospital, William Potter discussed a case of carcinoma of the left kidney with surgical removal, subsequent shock and fatal termination. The case presented many points of interest. Robert Sharp presented an unusual case of acrodynia in an infant, discussed briefly what is known about this somewhat rare condition. Doctor Kendall reported a case with fatal termination resulting from an accidental infection of the face. Doctor Fox urged the waiting game in rapidly spreading streptococcal infection about the head, advising hot antiseptic applications and other palliative measures until the suppuration becomes definitely focalized. Fox reported a case of secondary hemorrhage into the bladder following a prostatectomy. This case after repeated evidence of multiple emboli finally resulted fatally, undoubtedly from emboli in the brain. Discussion was entered into by Lee and Oatman.

On September 28, the staff of the County General Hospital discussed a group of very interesting cases presented by members of the residence staff. Discussion was spirited, but free from acrimony; the sort of exchange of views that make clinical meetings of real value.

The trustees of the Medical Library met at dinner October 12, as the guests of President Higbee to discuss plans and to nominate officers for 1927.

The annual election of the county society occurs before the regular dinner of November 9, on which occasion the meeting will be addressed by Dr. E. L. Gilcreest of San Francisco.

At the October dinner on the 12th the Society will have as honor guest Dr. Frank Hinman of San Francisco.

On November 18, Dr. Elliot P. Joslin of Boston will be the guest of the Scripps Metabolic Clinic, and will speak in the evening on the "Outlook for the Diabetic." This paper is based on Doctor Joslin's intensive study of the diabetic question throughout the years 1892-1926, inclusive.

ROBERT POLLOCK, M. D.



### SAN JOAQUIN COUNTY

**San Joaquin County Medical Society**—The stated meeting of the San Joaquin County Medical Society was held Thursday, October 7, at 8 p. m. at headquarters of

the local Health Center, 129 South American Street. The meeting was called to order by Vice-President McGurk, in the absence of the president. The twenty-five members in attendance were: E. A. Arthur, E. L. Blackmun, C. A. Broadus, H. S. Chapman, Fred J. Conzelmann, J. V. Craviotto, J. D. Dameron, Linwood Dozier, C. F. English, Minerva Goodman, E. C. Griner, R. R. Hammond, S. Hanson, J. P. Hull, R. T. McGurk, F. G. Maggs, F. S. Marnell, F. J. O'Donnell, Barton J. Powell, Dewey R. Powell, S. F. Priestly, G. H. Rohrbacher, George H. Sanderson, John J. Sippy, G. J. J. Vischi, and C. O. Bishop of Linden, California, as visitor; and Harold K. Faber of San Francisco as guest and speaker of the evening.

The minutes of the previous meeting were read and approved.

The committee on admission having recommended the acceptance of Winifred Biethan as a member, the chairman in accordance with the constitution declared Doctor Biethan duly elected a member of the Society.

Dewey R. Powell, chairman of the Committee of Medical Relief in Disaster, reported progress in getting matters started, and moved that the plan as outlined in the report of the A. M. A. Committee of Medical Relief in Disaster be adopted. The motion was seconded by Doctor Craviotto and carried. A vote of thanks was extended to Doctor Powell for his splendid report.

Doctor Powell requested authority to appoint the secretary of the local Red Cross Chapter, the chairman of the Red Cross Nursing Committee and a member of the dental profession to serve on the Committee of Medical Relief in Disaster.

The motion of Doctor Craviotto, seconded by Doctor Broadus, that the chairman of the Medical Relief Committee be given authority to enlarge the committee as he sees fit, carried.

The committee in co-operation with the local Red Cross will make a survey of the county relative to the personnel and material obtainable, and attempt will be made to have everything in readiness for function in time of need.

Doctor Powell stated that he would circulate a written statement for all members to sign that are willing to place themselves under direction of the president of the Society or his duly appointed deputy in the event of disaster.

The chairman introduced Harold K. Faber, professor of medicine and pediatrics, Stanford School of Medicine. Doctor Faber spoke on the subject, "Cranio Deformities in Infancy and Childhood."

He pointed out that the principal types of this class of cranial deformities were tower skull and oxycephaly, conditions resulting from premature union of the coronal suture. In this last condition the cranial dome is insufficiently elevated and lateral extension takes place below, the temporal region bulges, and the zygomata protrude. Deformity of the optic foramina or pressure on the optic nerve are responsible for optic neuritis and blindness. There may also be loss of the sense of smell.

About 8 per cent of cranial deformities occur in the male sex. When the deformities are great, operative treatment is needed to correct them. The cause of the deformities is not definitely known; syphilis is not common in these patients.

The speaker showed lantern slides that illustrated the conditions in a striking way. The paper was discussed by several members.

FRED J. CONZELMANN, *Secretary*.



### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society**—The regular October meeting of the Santa Barbara County Medical Society was held at the Cottage Hospital on Monday evening, October 11, 1926, with President Henderson in the chair.

There were present seventeen members and one visitor, W. E. Johnson, who is associated with H. F. Pierce.

The minutes of the preceding meeting were read, approved and ordered filed.

The first paper was "Surgical Diathermy in Malignant



and Nonmalignant Growths," by Horace F. Pierce. This paper was discussed by Drs. Smith, Henderson, Mellinger, and Spaulding.

Samuel Robinson, who was to have given a paper, was called to Los Angeles on an emergency case.

William J. Mellinger reported a meeting of the American Academy of Ophthalmology and Otolaryngology.

Henry J. Profant gave a very brief outline of his trip to Vienna, covering only the high spots as to how the clinics are maintained and the names of the most prominent men associated with them. A more detailed report will be given later.

Following the program a short business meeting was held at which the resignation of Alex C. Soper as secretary-treasurer of the Society was read, he having accepted a position in the adjutant's office of the Reserve Officers' Association of the United States at Washington, D. C. It was moved and seconded that the resignation be accepted. It was then moved and seconded that William H. Eaton be elected secretary-treasurer for the remainder of the ensuing year. As there were no other nominations, Doctor Eaton was unanimously elected.

W. H. EATON, *Secretary*.

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### SANTA CLARA COUNTY

The Santa Clara County Medical Society met at Louis' Cafe, Gilroy, September 15, and enjoyed a fine dinner. About sixty doctors were present from the surrounding towns. H. E. Dahleen, president of the Society, called the meeting to order, and asked Jonas Clark of Gilroy to preside. An address of welcome was delivered by City Attorney E. D. Crawford. During dinner a musical program was rendered.

W. D. Sansum of Santa Barbara was the speaker of the evening, his subject being "Diabetes." John Hunt Shephard of San Jose explained several amendments to the by-laws of the county society which were unanimously passed. It was decided to hold the next meeting of the Society at Agnews.

Those present were: D. E. Tiffany, C. P. Durney, Raymond A. Wayland, E. P. Cook, D. R. Wilson, R. A. Whiffen, N. H. Bullock, Charles E. Moore, Bert Lohr, Phillip L. Wise, Stanley Dougan, Dorothea Lea, Reta Hough, H. E. Dahleen, R. S. Kneeshaw, Van Ralstern, F. N. Moore, A. S. J. Smith, D. P. Fagerstrom, C. M. Bueschfield, George L. Barry, John Hunt Shephard, Clara E. Sanders, George A. Gray, E. A. Tweed, San Jose; Marie Vachout, San Martin; Clara A. Silva, H. R. Chesbro, Roland H. Prien, Jonas Clark, Hugo Schmitt, John A. Clark, E. D. Crawford, Thomas Crawford, W. F. Blake, Gilroy; Roscoe N. Gray, San Francisco; Blake Franklin, E. M. Miller, Los Gatos, Charles Fernish, S. W. Dowling, Santa Clara; W. D. Sansum, Santa Barbara; L. C. Hull, Hollister; W. L. Teaby, W. M. Gratiot, Monterey; F. R. Anderson, Campbell; L. M. Linscott, Santa Cruz.

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### SANTA CRUZ COUNTY

Santa Cruz County Medical Society—The September meeting of the Santa Cruz County Medical Society was an enthusiastic one, with some forty members and guests in attendance.

The meeting, as usual, opened at 11 o'clock on a Sunday morning and closed with a 1 o'clock luncheon.

From 11 to 1 was devoted to a clinic on Periodic Health Examinations conducted by Ernest H. Falconer of San Francisco. A high school boy was used as a subject, and the outline and forms issued by the American Medical Association were followed in making the examination. Falconer commented on the uses and significances of the various headings of the form as he conducted the examination. Questions were answered and suggestions from members commented on during the examination.

So much interest was aroused for the work that a num-

ber of members expressed the intention of introducing the practice among their clientele.

The American Medical Association forms and booklets were distributed to all present, and the program committee proposes another meeting devoted to the subject, to which members of the Society will be asked to bring their own forms with the patient's part already made out, the objective parts to be completed by an examination of each other at the meeting. When enough members become interested to make such effort advisable the publicity committee hopes to awaken public interest in the subject among citizens of the county through co-operation of the five county newspapers, and by presenting its importance to public audiences.

Another possible method of bringing the subject interestingly before nearly all citizens individually is outlined in the following letter prepared for use by individual physicians to their patients, and which is now before the state and national medical organizations for a decision as to the advisability of its use:

"Dear ———: You no doubt are familiar with the fact that physicians, through this organization and individually, are urging the importance of periodic examinations of all people by their family physician as an important factor in the promotion of health. You should have this service for yourself and all members of your family, dependents, and employees.

This letter, which has been approved by the Santa Cruz County Medical Society, is being sent by doctors who elect to do so to persons whose names appear on their records, which explains your receiving this letter from me.

If you consider me your doctor at present, you are invited to call me up, make an appointment and secure this assay of your health and that of members of your family, dependents, and employees. The examination requires about forty-five minutes and may be arranged for a convenient time.

If for any reason you have changed doctors since I last saw you, please take this important matter up with your present physician, who, no doubt, will be glad to render the service for you. Obviously, the examination should be made by the physician who is to give the advice, instructions, and other treatment—if any—indicated by the findings of the examination.

Yours very truly,  
— M. D. —

At the luncheon following the clinic, Dr. John Homer Woolsey of San Francisco delivered a eulogy of the late Saxton Pope, who practiced many years in Santa Cruz County, and always retained his place in the hearts of our people.

The president of the Society has appointed a medical milk commission consisting of Harry E. Piper, Lester M. Liles, Jessie Farmer, George P. Tolman, and Norman R. Sullivan. It is the duty of the commission to elect its own officers and arrange for the services of a veterinarian and an analyst—chemical and bacteriological—and to fulfill all other requirements of the national and state associations of medical milk commissions, including membership in these organizations.

### SHASTA COUNTY

Shasta County Medical Society—At the regular quarterly meeting of the Shasta County Medical Society the following officers were elected for the coming year:

President, J. E. Taylor, M. D.; vice-president, B. F. Saylor, M. D.; secretary-treasurer, C. A. Mueller, M. D.  
C. A. MUELLER, *Secretary*.

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### TULARE COUNTY

Tulare County Medical Society—The first monthly meeting of the Tulare County Medical Society for this season was held at Motley's Cafe in Visalia, October 3, following dinner at 6:30 p. m. The Society had present as their guests the dentists of Tulare County, there being eighteen present. The following members were present: Tilletson, Betts, Zumwalt, Gilbert, Paine, Ginsburg, Campbell, Brigham, Loper, Miller, Willey, Grosbeck, Hicks, Preston, Lipson, Edmund, Rosson, and Seligman.

The meeting was called to order at 8 p. m. by President Betts. The minutes of the last meeting were read and approved.

Charles Sweet, D. D. S., of Oakland was present and

spoke on the subject of "Children's Dentistry." Discussion followed.

Clifford Sweet of Oakland then spoke on "Factors That Influence the Child's Development: Heredity Period, Nutrition Period, Infection Period, and Posture Period." Discussion followed.

This meeting was the best attended and most enthusiastic of any that has been held for some time, and Tilletson of Dinuba moved, and it was unanimously carried, that thanks be given the Doctors Sweet for their addresses to the Society.

H. G. CAMPBELL, *Secretary*.

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### CHANGES IN MEMBERSHIP

**New Members**—Erich Kosterlitz, Arthur Perkins, James C. Raphael, Arthur E. Rickmond, Theodore E. Reynolds, Oakland; William A. Johnstone, Fresno; William Charles Johnson, Fellows; Albert Allen, San Pedro; George S. Bliss, Pomona; Glen Bradford, Louis M. Earle, Emmett A. Fagin, Jean R. Heatherington, Katsuji Kato, Llewellyn D. Lewis, Wilbur Lucas, Rea Proctor McGee, Owen W. E. Nowlin, Joseph H. Pavlinac, Mark H. Smith, Marshall A. Welbourn, Charles J. Welker, Los Angeles; Joseph A. Chapman, Glendale; Henry L. Davis, Huntington Park; Francis R. McCrea, Dwight C. Sigworth, Long Beach; Tesla C. Nicola, Montebello; Harry Venzke, Wesley J. Wooston, Pasadena; Fred W. Wood, Alhambra; Richard B. Penzotti, Rockport; John Albert Wahlen, Brea; Walter Earl Watkins, Santa Ana; William H. Byers, Blythe; Leonard W. Weaver, Sacramento; Chauncey M. Traver, Patton; Walter S. Cherry, Rialto; Elmer J. Davis, San Diego; William Dunlop Owens, Coronado; Minnie Berelson, Garnett Cheney, Esther B. Clark, Herbert H. Darling, Harvey K. Graham, Emile Fred Holman, Matthew N. Hosmer, Hiram W. Hunsaker, Mary Frances Kavanagh, Arthur C. McKenney, Jr., Ottiwell Wood Jones, Jr., Frederick C. Nass, Clarence C. Porter, Emile D. Torre, San Francisco; Samuel B. Randall, Santa Cruz; Robert E. Hughes, Gustine.

**Transferred**—Vernon G. Alderson, from Los Angeles County to Alameda County.

Elton R. Clarke, from Los Angeles County to Howard County, Indiana.

N. Fujimori, from San Francisco County to Alameda County.

George W. Garner, from Los Angeles County to Kern County.

Wilhelmina H. Jacobs, from Los Angeles County to Rock Island County, Illinois.

**Resigned**—Charles S. Ambrose, Henry S. Keyes, Los Angeles County.

**Deaths**—Adams, Charles Blackstone. Died at Santa Monica, August 28, 1926, age 54. Graduate of the State University of Iowa, College of Medicine, 1897. Licensed in California in 1909. Doctor Adams was a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.

Nadeau, Hubert. Died at Santa Monica, October 11, 1926, age 88. Graduate of the University of Montreal Medical Faculty, 1862. Licensed in California in 1876. Doctor Nadeau was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Selby, George Messick. Died at San Diego, September 26, 1926, age 47. Graduate of the Louisville Medical College, Kentucky, 1902. Licensed in California in 1924. Doctor Selby was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Yale, Alford Elihu W. Died at Burbank, September 13, 1926, age 47. Graduate of the University of Michigan Medical School, Ann Harbor, 1904. Licensed in California in 1919. Doctor Yale was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



EMANUEL CHARLES FLEISCHNER  
1882-1926

Seldom has a blow been driven home to the hearts of men with the poignancy that came to us upon the death of Emanuel Charles Fleischner. It was so sudden, so unexpected, seemingly so unnecessary. Only a few weeks before we had greeted him after his long vacation, full of animation, vivacity, enthusiasm and life, and now we have lost him, he is gone. However, we cannot forget him, for he had a nobility of mind and heart that is given to few, and to him it was given in a transcendent degree.

It is customary to note the past activities and achievements of men in obituaries such as this. We might tell of Doctor Fleischner's youthful and brilliant career at Yale, of his long postgraduate work in Europe and New York, and the splendid way in which he prepared himself for his work in medicine. Seldom was a better foundation laid, rarely one as good. Once in practice every energy was given to the advancement of medicine. As professor of pediatrics in the University of California he endeared himself to his students as a brilliant and stimulating teacher; in every society—civic, state, and national—he stood out as a conspicuous leader. He wrote much and he wrote well, yet another might have had these intellectual qualifications in an equal degree and yet lacked those very qualities that made Charles Fleischner dear to all. His magnanimity, his charity, his kindness of heart, his consideration of others to the abnegation of self, stood out so conspicuously that we were all drawn to him. No wonder that children loved him and trusted him, for theirs is the language of the heart, and he was all heart. He brought more to the sickroom than skill, he brought the very benediction of his presence.

All will miss Doctor Fleischner. His death is a loss that no length of time can replace, yet our loss is small in comparison to that of his dear and devoted helpmate and wife. To her goes out our deepest sympathy and commiseration. Our condolences are beyond the expression of words; they are silent messages that one who knew and loved Emanuel Charles Fleischner with all her being can well understand.



## UTAH STATE MEDICAL ASSOCIATION

W. R. CALDERWOOD, M. D., Salt Lake.....President  
E. H. SMITH, M. D., Ogden.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary  
J. U. GIESY, M. D., Salt Lake.....Associate Editor for Utah

### SEEMING DISCRIMINATION

Attention of all reserve officers is hereby called to Bulletin 210-31 A. G. under date of September 14, 1926. Briefly, this is a ruling by the comptroller applying to the status of enlisted men in the United States Army who may have been granted commissions in the reserve. Briefly, it states that such a man may not be ordered to active service at a training camp and receive pay during such service in his commission grade. We understand fully the policy of not paying a man twice. We understand the possible intent of not paying an enlisted man as such, and as an officer during the same period, but—

Under the National Defense Act of 1920 the intent of the War Department has been to build up the reserve as a very important element in the defense scheme of this country. This ruling now removes from the enlisted man who has accepted a commission under this act the very incentive which may have caused him to take such action, and it furthermore prevents the intent of the granting of such commissions from reacting in the intended way. Because under army regulations such a man to gain promotion or advancement must have attended at least one training camp of at least fifteen days, and the ruling practically puts up a bar against his taking such necessary steps in quite automatic fashion. It is a fact that other men in government employ are permitted to attend schools on pay and are still paid for the service to which they belong at the time such attendance is given. Then why discriminate? Why should the man in uniform be barred from the privilege given other employees of the nation both serve? We wish all reserve officers would think this over and seek to devise some means by which action looking to a reconsideration of this recent ruling—which is no less than a direct blow at, to say the least, the morale of a part of the reserve itself—may be obtained. This could be well done perhaps in the form of resolutions asking for some such action, passed by reserve organizations, civil organizations of which reserve officers are members, and personal letters to appropriate legislators. We feel that such action might well constitute a patriotic service. Under the comptroller's ruling the War Department is practically helpless. Action must come from outside sources if at all. But we trust that it may come none the less, since come it certainly should.

### AN INVITATION

The idea of a Utah section of CALIFORNIA AND WESTERN MEDICINE is to give representation to every part of the state in medical matters and consequently keep the entire body of the profession in touch with the activities of the several societies and their work.

Therefore, now that the component county socie-

ties have once more resumed meetings, we as the editor of the Utah section are again appealing to the secretaries and officers of these various societies or to any member of any society to send in to the office of the Editor, Felt Building, Salt Lake City, any news of value to medical readers before the 12th of each month. We are hoping that some will respond in the spirit in which this request is made. We cannot print the news unless we have it. We've done the best we could by clippings and reports gained in roundabout ways. But our task would be simplified immensely, and the results would be far better if a brief resumé could be forwarded to us for our use. Won't the various societies please co-operate?

### GUERRILLA WARFARE

About the only consistent thing about mankind is its consistent inconsistency. If you'll think that dictum over you'll agree with it perforce. And the worst of it is that it applies no less to the doctors than it does to the man in the street. We may rave about the dumb foolishness of our patients, but they have little on us when it comes to the way we conduct ourselves. And one of the worst bits of inconsistency, one of the most hurtful examples of this tendency, is manifested in the instances of gratuitous criticism of one another in which a few of our profession indulge.

We hold that to be able to criticize *anything*, the one who undertakes the critical task must know something about the subject under discussion. To put it baldly, he must know what he is talking about. This would presuppose that he be grounded in the elements of the situation, have a complete knowledge of the circumstances, incidents and details which resulted in bringing about the condition concerning which he gratuitously appoints himself a judge. How can he intelligently or justly evaluate the situation without? Yet how often do we meet instances of a physician seeking to criticize the work of another member of the same profession without any such fundamental groundwork of knowledge.

It appears to us more and more that such men are either deliberately indifferent to the principle of fairness, actuated by some petty feeling of personal spite, moved by an egotism sufficient to blind them to true proportions as affecting others, or else just simply hopelessly ignorant. In explanation of the last statement let us point out that the ignorant man is generally the surest in his assumption of knowledge, and the better-informed individual is one who hesitates longest in the assumption of infallibility as a characteristic of his own.

And yet criticism, unless well deserved, unless based upon the very best of knowledge, and then called for by circumstances making it practically obligatory, is one of the most foolish performances from a professional standpoint in which the doctor can indulge. Because criticism hurts the man criticized in a measure, hurts the man who criticises, in the esteem of his fellows, and possibly otherwise, and hurts the standing of the entire profession with the public rather more than any other one thing. For in the mind of the laity, if the profession doesn't know its stuff, then wherein is the profession any better than the cults? And any man who is guilty

of throwing doubt against the very art which he professes to practice is certainly guilty of a very foolish action, if nothing worse. Heaven knows, with the best we are able to do through the most sincere endeavor, we in our own hearts may yet find enough over which to criticize ourselves. So why in the name of common everyday intelligence should we seek to broadcast the possible shortcomings of our craft for the petty and puerile pap of a few minutes of self-shining in the eyes of some totally uninformed person with the light of an assumed brilliance which we seek to seem to possess? For even here there is a danger that, unless we are deadly sure of our ground, future events will prove that our brilliance was rather the *ignis fatuus*—fox fire of rotten misinformation, than something grounded on a full and true knowledge of the facts. And when that happens our little temporary illumination is very apt to go out.

And so as we have preached before, we are preaching again: Let's play the game as gentlemen. Let's develop an *esprit d'corps*—a sort of stick togetherness. Let's do the best we can with a full realization that we may make errors and mistakes, despite our sincerest efforts to avoid them, and that the other fellow may perchance do the same thing and eat his heart out in secret over them. Let's be broadminded enough to credit him with sincerity of endeavor the same as ourselves, rather than damn him for his errors, while speaking only of the successes which have crowned our own efforts. Let's have *sense* enough to know that every criticism of the work of another member of our profession, voiced in the ears of one who knows nothing of our work, its obstacles, difficulties and heartbreaking failures, and who judges us solely upon the basis of our end results, is a direct blow aimed at the very thing upon which the success and advancement of medicine as an art depends—at the average man's confidence—the trust, the faith he feels in the doctor. Criticism is of two sorts—constructive and destructive. Constructive criticism may build up, but gratuitous, undeserved or improperly grounded criticism *destroys*. The practice of medicine should be a "gentleman's game." Let's play it as such. Don't let's engage in this guerilla warfare of criticism behind the other fellow's back. That is the coward's trick.

**Utah News**—September 20 saw the resumption of meetings by the Holy Cross Clinical Association for the winter months. The meeting was held in the auditorium of the Holy Cross Hospital with a good attendance, President Peterson presiding. Barnard and Pugh presented a case of endocarditis; Bailey, an interesting problem in diagnosis between actinomycosis and tularemia; and Minear, a case of perinephritic abscess. Meetings begin promptly at 8 o'clock and end about 9:30. Members are invited to present interesting cases and to invite friends.

During the past month F. M. McHugh and Mrs. McHugh returned from Europe, where the doctor has been pursuing a course of special work in his specialty during the past four months. Most of their time was spent in Vienna.

E. G. Hughes and family have gone to Long Beach, California. Doctor Hughes will study in the coast universities while away.

The Editor left October 4 for a trip in the East. While absent he will visit New York, Philadelphia, and Chicago. At the latter city he will attend the convention of the American College of Physical Therapy.

Utah still leads the United States in the per capita en-

rollment of medical men in the Officers' Reserve Corps, U. S. A. Now that October is upon us and the correspondence courses are once more being started, we would like to appeal to every reserve officer to sign up for one of these courses. The reserve can only be as good as the men composing it, and the man can only be as good as his knowledge permits. Fall in! Sign up! For information write Headquarters 104th Division, Vermont Building, Salt Lake.

**Salt Lake County Medical Society** (M. M. Critchlow, secretary)—A regular meeting of the Society was held at the Commercial Club, Salt Lake City, September 27, 1926, President F. H. Raley presiding. Fifty-six members and four visitors were present.

Minutes of the previous meeting were read and accepted without correction.

F. F. Hatch presented a patient on whom he had operated for diverticulum of the bladder which had been present since infancy. The operation included transplantation of the ureter which ran into the diverticulum, and excellent result was obtained.

J. F. Sharp talked on "Extra Uterine Pregnancy." He described the etiology, pathology, symptoms, diagnosis before and after rupture, the differential diagnosis and the treatment. He illustrated his points with many examples from his own practice and gave a very interesting discussion of the résumé, which was discussed by H. S. Scott, Ray Woolsey, L. C. Stevenson, A. Lipkis, A. A. Kerr, and John Z. Brown.

C. J. Pearsall talked about eczema. He gave an excellent discussion of the various types and presented the diagnostic points between eczema and dermatitis venata, seborrheic dermatitis, infectious dermatitis, scabies, lichen planus, ringworm, syphilis, mycosis fungoide, periporiasis, and psoriasis. Discussion by William L. Rich.

Applications of C. W. Countryman and E. P. Oldham were voted upon and both were elected to membership, twenty-six votes being cast.

**Meeting of October 11, 1926**—Held at the L. D. S. Salt Lake City, President Raley presiding. Fifty members and five visitors present.

Minutes of the previous meeting were read and accepted without correction.

The scientific program was arranged by the hospital staff. The cases were well worked up and very interesting. The following clinical cases were presented and discussed:

"Shotgun Wound of the Foot," John Z. Brown; "Possible Chronic Tularemia," H. T. Anderson; "Possible Substernal Goiter," Henry Raile; "Stone in the Bladder in a Patient with Congenital Heart Disease," F. A. Goeltz, G. G. Richards, and Doctor Leigh; "Possible Addison's Disease," Clark Young; "Probable Tuberculous Epididymitis," O. J. LaBarge.

Communication from H. T. Fischer regarding the tour of Dr. Franz Nagelschmidt of Berlin was read.

## NEVADA STATE MEDICAL ASSOCIATION

W. L. SAMUELS, M. D., Reno.....President  
HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

**Officers elected at the Twenty-third Annual Session of the State Medical Association were as follows:**

President, W. L. Samuels, Reno; first vice-president, R. R. Craig, Tonopah; second vice-president, William H. Riley, Gold Hill; secretary-treasurer, Horace J. Brown, Reno. Trustee for two years, D. A. Turner, Reno. Trustee for one year, S. K. Morrison, Reno. Delegate to A. M. A., Horace J. Brown, Reno. Alternate, C. E. Piersall, Reno.

The minutes have not been received in time for publication in this issue, but will appear in the December number. Part at least of the papers presented at the meeting will be published during the coming months.



## READERS' FORUM

San Francisco, October 8, 1926.

*Dear Editor*—Pardon my bothering you about a trivial matter, but I wanted to call your attention to a change (apparently an editorial correction) in one sentence of my contribution to "Bedside Medicine for Bedside Doctors" in the October issue, which makes its meaning somewhat ambiguous.

The sentence in the manuscript reads as follows: "Having used inunctions and insoluble intramuscular injections of mercury for years, I never expect to employ either of them again." Then follows a recommendation of intravenous novasurol. The above sentence, as published, reads as follows: "I have ceased employing insoluble intramuscular injections, and I never expect to employ either of them again." Note that the phrase "either of them," referring to two methods of administering mercury, becomes meaningless in the amended sentence. I regret that the reference to inunctions was not retained, as many men consider them more efficacious than intramuscular injections, and I wished to emphasize the fact that I consider intravenous novasurol better than either one of these. My main objection, however, is to the possible confusion resulting from the present wording. I am almost tempted to ask that a "correction item" be inserted in the next issue.

One other thing: In the footnote about me at the bottom of the same page the impression is given that Dr. H. K. Faber collaborated with me in writing my second paper on Congenital Syphilis. As a matter of fact, it was the paper on "Leishmaniasis" that Doctor Faber and I published together in the A. M. A. Perhaps this change can be made in your files.

HERMANN SCHUSSLER, JR.

### FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, names and addresses of executive officers of coming meetings for insertion in this directory.

**American Medical Association**, Washington, D. C., May 16-20, 1927. Olin West, Chicago, Secretary and General Manager.

**California Medical Association**, Los Angeles, April 25-28, 1927. Emma W. Pope, Balboa Building, Secretary.

**Nevada Medical Association**, ———. Horace J. Brown, Reno, Secretary.

**Utah Medical Association**, Salt Lake City, ———. Frank B. Steele, Salt Lake City, Secretary.

**Pacific Coast Surgical Association**, Del Monte, February, 1927. Edgar L. Gilcreest, San Francisco, Secretary.

**Pacific Northwest Medical Association**, ———. Frederick Epplen, Spokane, Secretary.

**Pacific Coast Oto-Ophthalmological Society**, San Francisco, ———. Kaspar Pischel, San Francisco, President.

**Northern California Medical Association**, Woodland, ———. John D. Lawson, Woodland, Secretary.

**Southern California Medical Association**, Los Angeles, November 5 and 6, 1926. C. T. Sturgeon, 1136 West Sixth Street, Los Angeles, Secretary.

**Medical Women's National Association**, Washington, D. C., ———. Maud Parker, Medical and Dental Building, Seattle, Washington, Secretary.

**Western Branch American Urological Association**, Portland, Seattle, and Vancouver, July 5, 6, 7, 1927. Wirt B. Dakin, Los Angeles, Secretary.

The conviction that has been forced upon me by a lifetime devoted to invalids is that if the world were purged of fear, practicing physicians would be comparatively idle, and medical fakers would be distressingly lonesome. When it shall be realized that we throw fear into children as a stoker throws coal into a locomotive fire-box, and that we begin to do it as soon as they betray the first glimmer of intelligence, and keep it up until they escape from parental influence, we see how tremendous are the difficulties attending the prevention of fear.—Joseph Collins, Dearborn Independent.

The following graduates of medical colleges passed the physicians and surgeons' examination given in San Francisco, July 12-15, 1926. The figures show percentages obtained:

Dorothy May Allen, Oakland, 80 4/9; Theodore L. Althausen, San Francisco, 85 3/9; Boris Aronvitch, Los Angeles, 82; Suren H. Babington, Berkeley, 78 8/9; Louis Baltimore, Hollywood, 83; Alexander G. Bartlett, San Francisco, 85 5/9; Charles H. Beasley, San Francisco, 83 5/9; Augustus C. Beattie, San Francisco, 87 6/9; Arthur H. Beede, San Francisco, 84 1/9; Hobart D. Belknap, San Francisco, 79 4/9; Dudley W. Bennett, San Francisco, 89 1/9; Clifford O. Bishop, San Francisco, 85; Coleman A. Block, San Francisco, 82 7/9; Aberhardt C. Bost, San Francisco, 83 4/9; Frederic C. Bost, San Francisco, 85 1/9; Carl B. Bowen, San Francisco, 78 5/9; Robert T. Boyd, San Francisco, 84 1/9; Isabel P. Brier, Berkeley, 84 4/9; Monica S. Briner, San Francisco, 85 2/9; Paul R. Brust, San Diego, 84; Frederick C. Bugbee, San Francisco, 83 4/9; Robert Bulman, Westwood, 89 3/9; Patrick J. Byrne, French Camp, 83 2/9; Margaret E. Carlsmith, San Francisco, 84 4/9; Clifford M. Carlson, San Francisco, 81 7/9; Eduardo M. Castro, Los Angeles, 75 2/9; Henry D. Coles, Chicago, Illinois, 91 3/9; William C. Cooke, San Diego, 86 1/9; Edward F. F. Copp, La Jolla, 79 8/9; Herbert D. Crall, San Francisco, 85 1/9; Fritz J. Cramer, San Francisco, 84; Harold E. Crowe, Long Beach, 87 7/9; Lawrence R. Custer, San Francisco, 83 4/9; Donald A. Dallas, San Francisco, 82 5/9; Anna C. Danneman, Orange, 79 3/9; John M. Dodd, San Francisco, 79 6/9; Dave F. Dozier, San Francisco, 86 4/9; Chelsea D. Eaton, Oakland, 81 1/9; Paul M. Ellwood, Berkeley, 78 3/9; Lynn W. Elston, Fort Wayne, Indiana, 93 3/9; Sigrid A. Esbern, Los Angeles, 77; Leland M. Evans, Berkeley, 83 6/9; L. Ray Faubion, Ontario, 78 3/9; James L. Faulkner, San Francisco, 83 6/9; Robbin E. Fisher, Portland, Oregon, 83 4/9; Charles F. Flower, San Francisco, 86 4/9; Donald C. Fowler, San Francisco, 85 4/9; William O. French, Jr., San Francisco, 82 2/9; Leslie Freudenthal, Los Gatos, 82 5/9; Harold G. Gentry, San Francisco, 85 8/9; Samuel Glassman, Los Angeles, 78 7/9; Eugene C. Grau, San Francisco, 82 3/9; Ursula A. Greenshaw, San Francisco, 85 2/9; Wales A. Haas, Piedmont, 77 3/9; Cameron Haight, Stockton, 88 8/9; John T. Harrington, San Francisco, 77 2/9; J. Lawrence H. Hawkins, Jr., Exeter, 82 2/9; Charles T. Hayden, Oakland, 81 7/9; Archie W. Henry, San Leandro, 85 5/9; William P. Holbrook, San Francisco, 80; Owen H. Homme, Los Angeles, 82 8/9; Leland G. Hunnicutt, San Francisco, 79 7/9; Herbert A. Huntington, San Francisco, 78 6/9; Herbert W. Hyatt, Los Angeles, 84; Lawrence R. Jacobus, San Francisco, 85 1/9; Harold S. Johnson, Los Angeles, 79 7/9; Russell H. Kaufman, San Francisco, 83 5/9; John A. Kelleher, San Francisco, 82 4/9; John O. Kellogg, San Diego, 81 8/9; Wilbur E. Kellum, Modesto, 79 6/9; Vernon F. Kennedy, Represa, 76 5/9; Eugene W. Kenney, Sacramento, 76 8/9; William F. Kroener, Whittier, 87 1/9; Louis Lackner, San Jose, 82 4/9; Albert L. I. Leveton, San Francisco, 86 3/9; Joseph Levitin, San Francisco, 84 8/9; Angus C. McDonald, Los Angeles, 87 2/9; Margaret K. Mah, Berkeley, 81 3/9; Harold P. Maloney, Oakland, 85; William F. Manuel, San Francisco, 86; Chester Marsh, San Francisco, 86 2/9; Oscar C. Marshall, Watsonville, 87 5/9; Sergei V. Martchenko, Long Beach, 76; James L. Maupin, Jr., San Francisco, 80 6/9; John A. Merrill, San Francisco, 82 2/9; Stacy R. Mettler, San Francisco, 84; Warner D. Meyenberg, Salinas, 82 3/9; William F. Meyer, San Diego, 73 3/9 + 14% 87 3/9; Edith M. Meyers, Alameda, 81; Newton Miller, Salt Lake City, Utah, 78 6/9 + 2% 80 6/9; Raymond J. Millzner, Oakland, 80 6/9; Lewis F. Morrison, San Francisco, 82 8/9; Chester A. Moyle, Modesto, 77 2/9; Edgar J. Munter, San Francisco, 86 4/9; Henry D. Neufeld, Oroville, 79 4/9; Howard E. Newson, San Francisco, 78 3/9; John J. O'Connor, San Francisco, 79 1/9; Clyde J. Osborne, San Diego, 81; Benjamin H. Page, San Mateo, 79 6/9; Samuel L. Perzik, Los Angeles, 87 1/9; Albert Peterson, San Francisco, 75 2/9; Fred A. Polesky, San Francisco, 80 8/9; Pearl S. Pouppirt, Palo Alto, 81 7/9; Marcus H. Rabwin, Los Angeles, 84 3/9; William H. Rambo, Los Angeles, 76; Thomas H. Reiss, Fresno, 85 6/9; Philip A. Reynolds, Los Angeles, 81 1/9; Peter Riccardi, Los Angeles, 85 6/9; Gilbert P. Robinson, Los Angeles, 81 3/9; William L. Rogers, San Francisco, 87 4/9; Joseph S. Rubin, San Francisco, 81 1/9; Charles V. Rugh, Klamath Falls, Oregon, 84 1/9; Frederick K. Sauer, Milwaukee, Wisconsin, 82 6/9; Raymond R. Scott, San Francisco, 86 6/9; Virgil D. Sedgwick, San Francisco, 83 8/9; Samuel Shore, San Francisco, 82 3/9; Harry Singer, Los Angeles, 81 2/9; Margaret Sisson, Oakland, 83 3/9; Edward A. Skaletar, Los Angeles, 80; Pearl M. Smith, San Francisco, 81 8/9; Douglas D. Stafford, Alameda, 87 2/9; Walter L. Stevens, Los Angeles, 76 3/9; Homer P. Struble, San Francisco, 86; Paul E. Suehs, San Francisco, 83 6/9; Cletus S. Sullivan, Santa Clara, 83 6/9; Walter J. Sullivan, Los Angeles, 82 3/9; Joseph P. Szukalski, San Francisco, 84 8/9; Leland H. Taylor, Pacific Grove, 82 6/9; Sidney D. Thomason, Los Angeles, 79 3/9; Milton W. Thorpe, San Francisco, 85 1/9; Elizabeth W. Tock, Talmage, 86 4/9; Rafael M. Valenzuela, San Francisco, 82 7/9; William R. Vizzard, San Francisco, 80 4/9; Hugo O. Wagner, Mare Island, 76 1/9; Frederic Waitzfelder, Los Angeles, 73 1/9 + 4% 77 1/9; Karl F. Weiss, San Francisco, 86 4/9; Jesse H. West, San Francisco, 76 7/9; Leslie S. Whitaker, San Jose, 76; William D. Wightman, Los Angeles, 76 5/9; Dwight L. Wilbur, Stanford University, 83 5/9; William F. Williams, Oakland, 81 4/9; Shirley D. Wimmer, San Francisco, 80 5/9; Nelson A. Young, Venice, 78 5/9; Eugene Ziskind, Los Angeles, 89 2/9.



## MEDICAL AND HEALTH AGENCY NEWS

The monthly staff meeting of the Franklin Hospital Clinical Society was held on Monday, September 27, 1926, in the assembly room of the hospital. Members of the staff present were Irving S. Ingber, Ernst Gehrels, Harry E. Alderson, Carl Werner, Christie Peters, and George Becker.

After a brief business meeting clinical papers were heard by a large audience of visiting physicians. George Warren Pierce presented the following program: "Advances in Plastic Surgery." Demonstration of Case Results with Lantern Slides. "Demonstration of Operative Technique with Moving Pictures," after which many questions were answered by Pierce, showing the interest the profession at large has in plastic surgery. Again the motion-picture machine exhibited how useful it can be in clarifying many technical steps.

The second paper was by Ernst Gehrels, "Management of Cancer of the Rectum and Pelvic Colon with Demonstration of Cases," in which various operations for this condition were described and discussed. Some remarkable results were demonstrated, and physicians were urged to remember that this condition is not hopeless, and to advise and hasten early operative procedure because the statistics show a high percentage of recoveries in patients where early extirpation is employed.

M. S. Wolf presented his impressions resulting from his recent tour of the British medical centers.

At the conclusion of the meeting refreshments were served in the hospital.

An interesting illustration of the progress of women in medicine is indicated by the accompanying picture of the young women interns and resident staff of the Children's Hospital, San Francisco, with the director of the hospital.



This splendid hospital of 275 beds is one of the few institutions in which all patients are women and children; all interns and resident staff are women, and a majority of the visiting staff are women physicians. The far-reaching influence of this educational and health-serving hospital is indicated by the wide geographical distribution of the young women who seek their intern service there. Reading from left to right they are:

Ethel Barrow, Liverpool University; Charlotte A. Boehm, College Medical Evangelist, Los Angeles; Beryl H. Blake, University Colorado, Denver; Miriam Roskin, Liverpool University; Adena C. Dutton, University of Oklahoma; Rachel Ash, Woman's Medical College, Philadelphia; Jessie M. Bierman, Rush Medical College, Chicago; Mildred T. Squires, Woman's Medical College, Philadelphia; Harriet I. Skemp, University Iowa; Pearl V. Matthieu, Kansas University Medical School; Ruth A. Nethercut, assistant resident, Stanford University, San Francisco; Margaret C. Malone, Kings College Hospital, London; Ruth Garten, Stanford University, San Francisco; Bonnybel A. Hall, resident, University Iowa; James B. Cutter, medical director, New York Hospital, 1895.

Saint Joseph's Hospital staff, San Francisco, met October 13, A. S. Musante presiding, and heard G. D.

Schoonmaker discuss "Latest Methods in Gall Bladder Treatment." Duodenal tube therapy, diet and surgical procedures were outlined.

V. P. Mulligan spoke on "Management of Mental, Drug and Alcoholic Cases," concluding as follows:

"An early diagnosis is of great importance in mental disease patients, for in the beginning they may have symptoms of neurasthenia. Those with paresis and maniacal depressive psychoses are given to making poor business ventures, and an early diagnosis may save the family fortune. As there are many borderline and mixed cases, they should be under observation. If a patient refuses to go to a sanatorium, he should be sent to the Detention Hospital, where the court will determine his sanity. No one has the legal right to force a patient into a sanatorium. Never sign a warrant of insanity unless you have a complaint against the alleged insane patient. They are apt to be declared sane by a jury and then sue the party signing the complaint. If a patient is suffering from a chronic psychosis, it is advisable to commit him to a state hospital, as it takes years for recovery—if ever. Patients with senile and arteriosclerotic psychoses are usually harmless and may be cared for at home. Many live but a short time. Those suffering from a toxic psychosis, produced by drugs or alcohol, usually recover in a short time and can be cared for in a private sanatorium. This latter class also includes the psychoneuroses, the infection exhaustion and traumatic psychoses; also the psychoses associated with other diseases."

The program of November 10 follows:

"Early Signs of Cancer," Alson R. Kilgore; "X-ray and Radium in Uterine Carcinoma," W. E. Chamberlain; and "Demonstration of Rectal Cancer Cases," Ernst Gehrels.

Saint Luke's Hospital Clinical Club resumed its meetings Thursday, October 7, Howard H. Johnson presiding.

J. Marion Read discussed the subject of Graves' disease, calling attention to the relatively small progress that has been made in unraveling its etiology and pathogenesis. He preferred this term (Graves' disease) to designate the thyrotoxic syndrome, known also as exophthalmic goiter, and by other names. All the therapeutic procedures of the past based upon theories of pathogenesis have proved unsatisfactory, although by the employment of symptomatic treatment a large percentage of these patients recover. This disease seems not to differ from most others in that there is an irreducible minimum of mortality, a large percentage who recover, and a certain percentage of patients who become chronic sufferers. Because of spontaneous cure and a course marked by exacerbations and remissions, evaluation of therapy is exceedingly difficult, and many of the ideas as to the value of various therapeutic procedures become misleading on account of the "post hoc ergo propter hoc" fallacy.

Two case histories were shown illustrating the course of the disease and the results of surgical and nonsurgical treatment.

Doctor Read's remarks, which were characterized by the chairman as a careful, thorough, scientific presentation, were followed by general discussion from both medical and surgical points of view. Clement H. Arnold noted as a point of interest that many diseases that were ascribed to a psychogenic state or origin have now been found to be a part of a thyroid condition; also, as a matter of treatment, that it had been recently discovered that thyroxin is not the equivalent of desiccated thyroid gland. The feeding of the gland is better than the administration of thyroxin.

Doctor Castelhun dwelt on the importance of the time element in treatment. His experience had been that in spite of good surgery, many had shown little improvement, a result that showed the importance of not hastening into radical steps based upon some theory of etiology.

From the x-ray point of view, John Rehfish made a plea for more conservative methods, stating that a large proportion of patients treated with x-ray come in with scars on their necks which have been given them by perfectly efficient surgery. He stated as his belief that if



conservative methods are used, 80 to 90 per cent will not need more radical treatment.

Speaking as a surgeon, Brooks expressed his belief that, aside from the old school who treated all thyroids with surgery, the average goiter patient gets a combined treatment—rest, iodine, x-ray, and then sometimes surgery. He spoke of the difficulty of deciding just which patient should have iodine and also the danger of iodine therapy leading the doctor to a false security in operating before the patient is in good condition. He closed his remarks with the presentation of a recent patient upon whom subthyroidectomy had been done and who was now back at his work and gaining weight. Iodine apparently made him worse.

Read closed the discussion with the statement that, while we know very definitely the relationship between hyperplasia and iodine, we do not know how iodine reduces the toxicity in some patients, but we do know that this effect is obtained in spite of many statements in literature as to how much harm iodine does. Some may not act well with iodine, but this cannot be attributed with certainty to iodine. We are on safe ground in giving iodine to any patient with a hyperplastic goiter, and it is a fact that some patients with adenoma do well on iodine, as was demonstrated in a recent patient of his own in whom iodine was given preoperatively.

The purpose of the Tuesday morning clinical-pathological meetings of the Mount Zion Hospital staff is to critically review the deaths that have occurred in the hospital, and to discuss any other subject of interest to the staff.

L. I. Breitstein discussed the subject of sterility in women. He is impressed with the apparent increase in the last twenty years of the incidence of sterility, and believes that as high as 20 per cent of married women are sterile. He has noted as the two main causes of sterility, infections due to an induction of abortion resulting in an endometritis and occlusion of the tubes, and gonorrhea.

He outlined his routine procedure as follows:

Examination of the vaginal contents within an hour after intercourse. If there is an absence of motile spermatozoon the husband is referred to a urologist. The reaction of the vaginal secretion is taken with litmus paper, as is also the secretion from the cervical canal. The condition of the cervix, uterus, and ednexa is carefully noted. If the examination up to this point is normal the woman is referred for the Rubin's procedure.

Franklin I. Harris outlined the technique of the Rubin's procedure. He stated that carbon dioxide is the preferable gas to use because of its rapid absorption from the peritoneum, usually disappearing from fifteen to twenty minutes where as oxygen takes one to three hours and air one to twenty-four hours. The insufflation of the fallopian tubes is practically without danger, and is done with very little pain or inconvenience to the patient. There are several contraindications, however, which must be carefully observed, namely, acute pelvic inflammatory disease or any cardiac or renal trouble. The preferable time for the procedure is from five to ten days after the menstrual cessation. The diagnostic value of this procedure is absolute insofar as the patency of the fallopian tubes is concerned, and in addition it has a small but definite therapeutic value, as it has been found that in 10 to 15 per cent of the patients pregnancy results following the insufflation of the tubes. In patients in whom the tubes are shown to be occluded by the Rubin's procedure, visualization is attempted by the injection of 5 to 10 cc. lipiodol into the uterus through the cervical canal. By this means it has been possible to visualize exactly the nature of the obstruction in the tube and determine the advisability of operative interference.

Mast Wolfsohn confirmed the value of the Rubin's procedure as a diagnostic and therapeutic measure, but stated that the indiscriminate use of lipiodol in visualizing the pelvic organs might defeat the purpose of the investigation by causing an occlusion of the tubes from the lipiodol itself. He also reported having read of two patients of air embolism following the insufflation of the tubes.

A case of acute fulminating eclampsia was presented

for discussion. Patient had been under routine observation during pregnancy. At final examination in the doctor's office she showed a marked increase in weight over the previous month and a heavy trace of albumin. Hospitalization was advised. Shortly after admission patient developed a chill, and temperature arose to 40.2. Urinalysis showed three plus albumin and a number of pus cells. There was a leucocytosis of 17,000 with 77 per cent polymorphonuclears. Blood pressure, 135/65. Symptoms of toxemia continued with a rise in pulse, temperature and respiration, and fifteen hours after admission to hospital a dead full-term fetus was extracted by forceps. Within two hours after delivery patient had her first and terminal convulsion.

A. Nahman enumerating the causes of sudden postpartum deaths as being due to (1) rupture of uterus, (2) hemorrhage, (3) embolus, and (4) eclampsia, felt that this particular case belonged to the acute eclamptic toxemia class.

L. I. Breitstein in discussion emphasized the significance of a sudden increase in weight at term as a danger signal to the physician of an impending toxemia and fetal death.

R. K. Smith advocated combating acidosis of this toxemia as determined by carbon dioxide estimation by large doses of 50 per cent glucose intravenously, gastric lavage with bicarbonate of soda solution and emptying the uterus by Caesarean section. His mortality up to three years ago was 8 per cent compared with the best mortality rate by other methods of 17 per cent, and during the last three years, with perfection in technique, he has lost only one patient from eclampsia.

A case of primary peritonitis confirmed by operative findings was presented for discussion. Charles G. Levison, although recognizing the existence of the clinical picture known as primary peritonitis, stated that if surgical intervention had taken place one should never feel satisfied with this diagnosis until thorough examination of every possible focus in the abdomen has been made. In particular he stated that there is great danger of overlooking a pin-hole perforation of the stomach which is temporarily covered over by a fibrinous exudate.

Fred Firestone pointed out that primary peritonitis should be treated medically, as it is a part of an acute systemic infection caused by pneumococcus, streptococcus and influenza, measles and scarlet fever. Surgical intervention increases the mortality.

Harold Brunn agreed that conservative treatment is indicated, but stated that the great difficulty was in making an exact diagnosis of primary peritonitis. He suggested the procedure recommended by Neuhof of performing an exploratory abdominal puncture with smear and culture of the peritoneal secretion thus obtained.

E. R. Olsen gave a resumé of the published clinical and experimental reports on the value of thoracic duct drainage in peritonitis. From these reports he concludes that there is little value attached to this procedure. The essential thing in the treatment of peritonitis lies in the treatment of complicating intestinal obstruction for which ileocolostomy is advised.

Prominent physicians and other citizens are well advanced in an effort to secure another much needed hospital for the people of Napa, California.

A good, well-conducted hospital is as much a necessity for every community center as are doctors, dentists, nurses.

The western branch of the American Urological Association is to be held in Portland, Seattle, and Vancouver, July 5, 6, 7, 1927.

President, Louis Clive Jacobs, San Francisco; vice-president, Anders Peterson, Los Angeles; secretary, Wirt B. Dakin, Los Angeles; treasurer, William E. Stevens, San Francisco.

In these days of rapid, easy and comparatively inexpensive transportation, one physician's patients today are likely to be another's tomorrow. This is particularly true of persons with chronic ailments and such diseases as tuberculosis. California's justly famed climate and

other attractions is producing a growing immigration of such citizens from other states and their frequent changes of location within the state.

Many of them have the intelligence to secure letters from one doctor and one institution to another, and it often happens that distant doctors recommend to their patients California institutions and physicians selected from the advertising pages of CALIFORNIA AND WESTERN MEDICINE.

Thus the value to doctors, hospitals, and other health agencies, of ethical notices in the columns of the magazine owned and published by the California Medical Association.

As this is written, the editor has before him a telegram from a doctor in a great eastern city asking which of the several tuberculosis sanitariums advertised in our columns is best adapted for a wealthy and discriminating patient about to start for California. This is by no means an infrequent occurrence. Doctors and other ethical medical agencies are learning more and more the value of looking to ethical medical publications for reliable information to pass on to patients who are going into territory beyond their doctor's familiarity with conditions, institutions, and men.

Thus one far from insignificant value of ethical appeals by doctors and institutions who wish patients from more than local sources.

Most of the better class sanitariums for tuberculosis patients are listed in our advertising space to their advantage, as well as advantage to other doctors everywhere. Those so listed are:

Alum Rock Sanatorium, San Jose; Banning Sanatorium, Banning; California Sanitarium, Belmont; Colfax School for the Tuberculous, Colfax; Enloe Sanatorium, Paradise; Los Gatos Clinic, Los Gatos; Monrovia Clinic, Monrovia; Oaks Sanitarium, Los Gatos; Pottenger Sanatorium, Monrovia.

Advertising copy is accepted only from those hospitals, sanitariums and other health agencies as are approved by the Hospital Committee of the California Medical Association.

## NEWS ITEMS FROM CALIFORNIA BOARD OF MEDICAL EXAMINERS

By CHARLES B. PINKHAM, M. D., *Secretary*

Walter Raleigh Anderson, M. D., on September 22, 1926, is reported to have pleaded guilty in the courts of Los Angeles to contributing to the delinquency of Gloria Delmar, a 19-year-old motion picture actress, and was sentenced by Judge McLucas to serve one year in the county jail of Los Angeles County.

The American College of Sagliffology, Corporation No. 120733, came into official existence October 4, 1926, with headquarters at San Diego. Among its purposes is to teach the theory and practice of a system of measuring and determining body contours; to teach anatomy, physiology, mensuration, and the theory and practice of sagliffology, also to grant such literary honors as are usually granted and awarded by any university, etc. Newspaper comment relates "it is not a preparatory course for judges in a bathing beauty contest," further relating that graduates will be known as "doctors of sagliffology."

According to an Associated Press Dispatch, dated Buffalo, New York, October 12, it is related "that cheap cosmetics often poison their users." Dr. S. Dana Hubbard, chairman of a Committee on Patent Medicine Supervision, Bureau of Foods and Drugs, recommended to the American Public Health Association today that proper legislation be passed governing the sale of face powders, hair dyes, lotions, creams, and freckle removers. Doctor Hubbard named lead, arsenic, mercury, wood alcohol, and coal tar dyes as drugs which have been permitted to enter into the composition of many of the preparations and which menace the health of users (San Francisco Examiner, October 13, 1926). This item is deserving of consideration in connection with any so-called beauty specialists' legislation and closely follows the recent death of Mrs. Louise Wulbers in San Francisco, following the application of a strong carbolic acid solution for face

peel, mentioned in "News Items" of September and October, 1926.

A charge of manslaughter was dismissed yesterday against Dr. Zalick Saltzman by Police Judge D. S. O'Brien after the court had heard testimony in the case of Mrs. Louise Wulbers of San Jose, who died at 720 Powell Street, September 27, while she was receiving beauty treatment for the removal of wrinkles. The court dismissed the charge for lack of evidence. Several days ago the Coroner's Jury recommended legislation forbidding the use of carbolic acid in such treatment.—San Francisco Examiner, September 27, 1926.

"Philosophy and a girl's freckles mixed with absent treatment and the 'laying on of hands' when Albert Yoder went to trial before Superior Judge Lincoln S. Church in Oakland yesterday. The philosophy is Yoder's expressed by two degrees received from the Christian Philosophical Institute in the Pacific Building. The freckles are Every Lyda's." The article relates that in the summer of 1925 the complaining witness, a girl of 14, was hit in the eye with a baseball, that she went to Yoder for treatment of her eye. Yoder denied this, stating that all he did was to lay hands on the injured eye and relating that some of the treatments were absent treatments. "These were verified by a receipt for \$10." He testified that he spent something less than a year of study with the Christian Philosophical Institute, which conferred upon him the degrees of Ph.D. and D.D. The Christian Philosophical Institute came into the limelight some time ago with the investigation by the authorities of "Bishop" Wilbert Cosper, founder of the institute. (See "News Items," June, 1925; March, May, June, and September, 1926.)

Authority to bring quo warranto proceedings against the Medical Service Corporation of Los Angeles to find out whether or not physicians can practice as a corporation has been given by Attorney-General U. S. Webb. . . . Webb stresses the importance of having the question settled. "The right of a corporation to engage in the practice of medicine is a question of grave importance which should be submitted to our courts for authoritative and final determination," he said. The opinion also stated that the law forbidding attorneys to enter a corporation would probably apply to physicians, as the same intimate relations of trust and confidence which exist between attorney and client also exist between physician and patient.—San Francisco Chronicle, September 25, 1926.

The San Francisco Examiner of October 6, 1926, printed a press dispatch from Oster, Ohio, October 5, relating that Edmund Gammencind, alias De Regnier, 29, wanted by the New York police in connection with alleged motion picture frauds, was arrested by the authorities of Orville, Ohio. Gammencind claims to have been a surgeon in the United States Army.

Dr. "David" Franklin of Maxwell, and well known here, accused by the State Board of Medical Examiners of practicing medicine under fraudulent credentials, was last week cited to appear before the board in Sacramento October 18 to show why his credentials should not be revoked. . . . Doctor Franklin, whose true name is said by the board to be Oscar Franklin, is alleged to have practiced over a long period of time as "Dr. David Franklin," who died many years ago in New York.—Willows Journal, September 21, 1926.

A press dispatch dated Santa Rosa, September 15, relates "Mrs. May Frick, charged with the death of Mrs. Nella Mitchell of Calistoga upon whom she is alleged to have performed an illegal operation, was arraigned today before Justice Marvin Vaughn."—San Francisco Examiner, September 16, 1926.

According to the San Francisco Examiner of October 18, 1926, David Gossard was indicted by the United States Grand Jury accused of issuing false narcotic prescriptions, the prescriptions purporting to be signed by Dr. Herbert G. Drew. The Board of Medical Examiners recently has received several complaints reporting that an individual giving his name as Dr. Herbert G. Drew would call at drug stores, unfold a brief bag and empty therefrom a stomach pump, as well as other minor articles, announcing himself as a doctor and asking the druggist if he could repair the instrument. During the con-



version he would write a prescription for narcotics, giving a fictitious San Francisco address and a narcotic registration number issued to one of our prominent San Francisco physicians. He would request the druggist to give him the narcotic, as he was going directly to the patient's home. In some instances he succeeded in getting the narcotics, but a wide-awake San Francisco druggist, on whom he endeavored to perpetrate the scheme above mentioned, called the police and now the mythical Doctor Drew, who claims his name is David Gossard, is in the hands of the federal authorities. There is also a charge against him pending in the state court which will be pressed later.

According to an Associated Press Dispatch dated Washington, D. C., October 11, "Frank C. Hart, Portland, Oregon, convicted of violating the Mann Act in a series of journeys from Canada to San Francisco, on which he purchased a woman's railroad ticket, today was denied a review by the United States Supreme Court" (Sacramento Bee, October 11, 1926). A press dispatch dated Portland, Oregon, October 11, 1926, relates "Dr. Frank C. Hart, prominent Portland physician, probably will start serving his five-year sentence at McNeil's Island at once as the result of the action of the United States Supreme Court today in denying review of his case. Doctor Hart was convicted of violating the Mann Act here May 29, 1925."—Sacramento Bee, October 11, 1926.

David (Oscar) Franklin, Frank Hart, M. D., Edwin V. Heaton, M. D., L. T. A. Hotten, M. D., Harrison Hulse, M. D., Howard L. Moffat, M. D., Clarence J. Neilson, M. D., Newton B. Siler, M. D., Duncan E. Stewart, M. D., O. E. Werner, M. D., have all been cited to appear before the board at the meeting to be held in Sacramento commencing October 18, 1926, to show cause why their licenses should not be revoked based upon various violations of the subdivisions of Section 14 of the Medical Act.

A coroner's jury yesterday absolved Dr. M. James McGranaghan, chiropractor, of 1171 Market Street, of blame for the death of James McManus, Jr., 6 years old, who died while undergoing treatment for an affliction of the hip at the hands of Doctor McGranaghan, September 16. The chiropractor is now technically under arrest on a charge of manslaughter. . . . (San Francisco Chronicle, October 6, 1926.) Previous news items relate that it was reported McGranaghan admitted that an anesthetic had been administered to the boy to reduce a congenital hip dislocation, but before the hip could be set the boy's heart failed. Under the state law a chiropractor is not licensed to administer anesthetics.

Abraham Lair, who says that he practiced in Illinois, Mississippi, Alabama, Texas, and Oklahoma *without the formality of obtaining a license*, was recently reported arrested in Los Angeles on a charge of violation of the Medical Practice Act.

M. T. Larkin, chirothesian, on September 18, 1926, was sentenced in the Superior Court of San Diego County to pay a fine of \$100 or serve thirty days in the county jail. Previous reference appears in "News Items" of June and December, 1925, also July and September, 1926.

Elmer W. Litle, M. D., was reported arrested in Los Angeles, September 22, 1926, on a charge of violation of the State Poison Law, it being alleged that he sold morphin and cocaine to an operator for the Pharmacy Board for \$20.

William J. Long, the holder of a certificate from the Spiritualistic Healers' Association, was reported to have pleaded guilty to a charge of violation of the Medical Practice Act in the Superior Court of Orange County at Santa Ana on July 30, 1926, and was sentenced to pay a fine of \$100, which fine was paid into court by the defendant.

According to reports, J. A. McElroy, a colored janitor of Los Angeles, on September 24 paid a fine of \$100 on a charge of violation of the Medical Practice Act. Our investigator relates that McElroy stated he had paid \$300 for a "testimonial of merit" from the Moller College of St. Louis, Missouri, and was informed that said "testimonial" would permit him to practice in practically all of the states of the Union.

Dr. Allen I. Mann, 29, a physician, will be arraigned

today in the Municipal Court on a charge of selling narcotics. The doctor, who lives at 2803 Halldale Avenue, was arrested after he was alleged to have administered drugs illegally to a young woman, according to the authorities.—Los Angeles Illustrated Daily News, September 13, 1926.

Dr. Orlando Edgar Miller, psychologist, and two others were served with a notice that F. E. Miller, local business man, had entered a suit against them for \$101,000 for alleged persecution, according to the San Francisco Call of September 21, 1926.

A mysterious individual using the name of Alma Stevens Pennington, M. D., of San Francisco recently attempted to obtain a reciprocity certificate in the state of Michigan by fraud, using the credentials, etc., of the legitimate Alma S. Pennington and giving her address as Box 233, Rockville, Indiana. Although a watch was placed on this box, it is reported that the impostor has not called for her mail.

William Jules Poll, who has been a violator of the Medical Practice Act on other occasions, was on September 28 arrested and pleaded guilty in the Justice Court of Pasadena Township, paying a fine of \$200 for violation of the Medical Practice Act. At the same time it was reported that he was arrested by representatives of the Pharmacy Board on a charge of violation of the State Poison Law, pleaded guilty and was fined \$50. Both sentences carried an alternative jail sentence, which was suspended on condition that the defendant refrain from further violation of the law.

William Joseph Ryan, M. D., was reported arrested in Long Beach, September 30, 1926, on an embezzlement complaint issued by the District Attorney. "This case resulted from the murder last spring of F. W. McLaren by his wife Adelaide McLaren, who was recently sentenced to serve from one to ten years in San Quentin for pleading guilty to a charge of manslaughter. It seems that Doctor Ryan attended McLaren after he had been stabbed by his wife and that after the death of McLaren his brother-in-law entrusted to Doctor Ryan \$3135 of McLaren's money for safekeeping and that Doctor Ryan retained \$2435 of the money, claiming it was due him for professional services rendered the deceased."

Clarence E. Salter, licensed optometrist of Los Angeles, was arrested in Los Angeles September 16 on a charge of violation of the Medical Practice Act, it being alleged that he practiced beyond the limitation of his optometry license by using drugs in the treatment of a patient, according to reports of investigations.

Charged with performing an illegal operation on Miss Eva MacArthur, Charles Spencer, 70, today was arraigned before Municipal Judge Charles D. Ballard. . . . (Los Angeles Herald, October 6, 1926.) Report of our special agent relates that on April 12, 1926, he charged Spencer with violation of the Medical Practice Act after finding that he was practicing without a license though claiming to be a chiropractor; that Spencer pleaded guilty and was given a sixty-day suspended jail sentence on condition that he would not violate the law for two years. It was related that Spencer claims he practiced in Denver, Colorado, for eight years without a license.

Dr. Herbert M. Ward, a graduate of the McCormick Medical College, Chicago, and licensed as a druggess practitioner in the state of California, took his life on October 13 by a dynamite explosion at El Mirasol Sanitarium at Tujunga, California.

According to an Associated Press Dispatch dated Vancouver, British Columbia, October 2, published in the San Francisco Call the same date, Dr. Thomas Verner, 63-year-old Vancouver physician, was arrested last night and accused of murder in an information which charged that he performed an illegal operation causing the death of Mrs. Flora Graham here Thursday.

Dr. W. E. Williams, held to answer in Superior Court charged with murder as the result of the death of Miss Evelyn Taylor, was at liberty today under \$5000 bond. The charge followed the death on September 11 of Miss Taylor following an alleged illegal operation which

Doctor Williams is accused of having performed.—Los Angeles Herald, October 6, 1926.

An Associated Press dispatch dated Reno, Nevada, September 13, published in the Sacramento Bee of the same date relates: "Alleging that after twenty weeks of treatment she was forced to seek other physicians and submit to x-ray examinations, Lillian M. Green has filed suit for \$18,000 against Dr. G. S. Wong, Chinese practitioner. She seeks \$8000 actual and \$10,000 punitive damages. The plaintiff asserts she was charged \$240 for the treatments."

**Intravenous Administration of Sodium Chloride in Bromoderma**—Paul E. Bechet, New York (Journal A. M. A., reports three cases of bromoderma that responded well to the injection of 50 and 100 cc. of decinormal sodium chloride solution intravenously, and three times a week thereafter in doses up to 100 and 220 cc., the solution being changed from decinormal to normal after the first injections.

More and more the child is being removed from the home and put outside it for care, nurture, shaping of character, developing of intelligence. At a recent conference of the Child Welfare League of America it was urged that it is the duty of the state to act as parent and that the whole tendency of state control and protection of childhood is wholesome. Through all grades of society the current sets in the same direction.—Florence Finck Kelly, Century Magazine.

I do the very best I know how; the very best I can; and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won't amount to anything. If the end brings me out wrong, ten angels swearing I was right would make no difference.—Abraham Lincoln.

"The toll on the word 'please,' in telegrams sent in this country, amounts to \$10,000,000 a year."

That's better medicine than 300 million for cosmetics.

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Caloric value pr. 100cc.	68.0	68.0
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Fat .....	3.5—3.6%	3.59*
Carbohydrate .....	7.3—7.5%	7.57*
Ash. ....	0.25—0.30%	0.215—0.226*
pH .....	6.8—7.0	6.97**
Δ .....	0.56—0.61	0.56***
Electrical conductivity at 18° C. ....	0.0022—0.0024	0.0023***

\*Average per cent according to Holt, "American Journal Diseases of Children," Vol. 10, page 239, 1915

\*\*Davidsohn, H.—Ueber die Reaktion der Frauenmilch, Zeitsch. for Kinderh., Vol. 9, 1913, page 15.

\*\*\*Friedenthal, H.—Ueber die Eigenschaften künstlicher Milchersera und ueber die Herstellung eines künstlichen Menschenmilchersatzes. Zentrab. f. Physiol., Vol. 24—1910—page 687.

**P** HYSICIANS agree that breast milk is the ideal food for the human infant. When breast milk is not available, or as a supplement to breast milk, S. M. A. may be prescribed as an able substitute for feeding normal, full-term infants, or in the milder cases of malnutrition.

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# CALIFORNIA AND WESTERN MEDICINE

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## Cow's Milk, Water and MEAD'S DEXTRI-MALTOSE

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## THE EXPERIMENTAL PRODUCTION OF ARTERIOSCLEROSIS ASSOCIATED WITH INCREASED BLOOD PRESSURE†

By FRANKLIN R. NUZUM \*

**F**OUR groups of factors have been outlined by numerous investigators as of etiologic importance in the production of arteriosclerosis and increased blood pressure.

To these a fifth group has more recently been added, i. e., a disturbance of the acid-base balance resulting in the excretion of excessively acid urines. This disturbance of balance has been produced by high protein diets both in man and in experimental animals. The dietary of the American people with its excess of meat, cereals and bread, is of this acid type.

By feeding various excessive protein diets to experimental animals for periods as long as two years, we have obtained increased blood pressures. The animals in which the most marked increase of blood pressures were obtained presented extensive arteriosclerosis of the aorta and in many instances of the coronary arteries. Evidence of kidney damage was also obtained, as demonstrated by chemical studies of the blood and urine.

The histology of arteriosclerosis is described and the similarity to human arteriosclerosis pointed out.

The occurrence of spontaneous sclerosis in rabbits is discussed and its absolutely different histological picture is considered.

The possibility of long-continued disturbance of the acid-base balance of the body as evidenced by the excretion of an excessively acid urine and of a lowered  $\text{CO}_2$  of the blood plasma (vols. per cent) being a causative factor in the production of arteriosclerosis is considered.

DISCUSSION by W. T. Cummins, San Francisco; Newton Evans, Loma Linda; A. M. Moody, San Francisco.

German investigators, particularly Schmittman,<sup>5</sup> Antischkow,<sup>6</sup> and Schoenheimer,<sup>8</sup> have produced experimental arteriosclerosis in the vessels of rabbits by feeding diets that contained considerable amounts of protein and cholesterol. These investigators contended that the excessive cholesterol in the diet was responsible for the sclerosis.

I have undertaken feeding experiments in the effort to produce arteriosclerosis. I selected the diets

### INTRODUCTION

**T**HE degenerative diseases of the cardiovascular, renal system are now killing more people than any other group. During the past fifty years the span of human life has been increased nineteen years. As a result of the efforts of medical science, it is likely that this span of life will be further increased and consequently a larger number of people will be entering the decades of life in which high blood pressure and the conditions which are closely related to it—chronic nephritis and heart failure—are more apt to occur.

The causes of hypertension are not proved. Of the theories advanced three are given most prominence: (1) That focal infection plays a prominent rôle; (2) that an increased cholesterol content of the blood stream is a prominent factor; and (3) that excessive protein diets are in some measure responsible.

The difficulty of relating the etiological factors of chronic nephritis, high blood pressure and fibrous myocarditis in the human, lies partly in the long span of years that elapses between the onset of the condition and the time when the vital organs may be obtained from the body for study. To offset this handicap, numerous experimental studies have been undertaken with laboratory animals to produce sclerosis of the vessels and a chronic nephritis comparable to that found in man. The objection that has been raised to most of this work is that the sclerosis and nephritis produced does not resemble human sclerosis and nephritis. Feeding experiments undertaken in an endeavor to produce these changes have received little attention.

Newburgh and Clarkson<sup>4</sup> have succeeded in producing a marked arteriosclerosis in the aortas of rabbits fed on high protein diets. These changes occurred quite regularly after six months on such a diet. The criticism of this work was that these diets were not well balanced and that the lack of a proper diet in itself might have had some relation in the causation of the sclerosis that was found.

† Address as Chairman of Section on Pathology and Bacteriology at the 1926 Session of the C. M. A., Oakland.

\* Franklin R. Nuzum (Cottage Hospital, Santa Barbara, California). M. D. Rush Medical College, 1913; B. S. University of Wisconsin, 1913. Graduate study: Intern service, Presbyterian and Augustana hospitals, Chicago, 1913-15; assistant to Dr. James B. Herrick, Chicago, 1915-18. Hospital connections: Medical Director, Santa Barbara Cottage Hospital, Santa Barbara. Scientific organizations: Santa Barbara County Medical Society, C. M. A., A. M. A., Chicago Institute of Medicine, American Association of Pathologists and Bacteriologists, Pacific Interurban Research Club. Practice limited to Medicine since 1915. Publications: "Effect of Cholesterol on Phagocytosis," Jour. of Infectious Disease; "Study of Cerebral Edema," J. A. M. A., December, 1916; "Diagnosis of Infarction of the Entire Spleen," J. A. M. A., February, 1918; "Eosinophilous Myocarditis in Diphtheria," J. A. M. A., December, 1925; "Experimental Uranium Nephritis," Archives of Internal Medicine, 1923; "Spontaneous Rupture of the Heart," Amer. Jour. of Medical Science, 1926; also papers on nephritis and arteriosclerosis published in various issues of the Archives of Internal Medicine.

so as to avoid the criticism raised as to a poorly balanced ration. For example, the liver protein diet contained:

	Per cent
Wheat .....	30.0
Maize .....	20.0
Casein .....	20.0
Liver .....	20.0
Navy bean .....	5.5
NaCl .....	1.0
CaCo <sub>3</sub> .....	1.5
Cod liver oil .....	2.0

Amounts of tomato were also given.

Twelve animals were kept upon this diet over a period of two years, which represents approximately one-third of the life of a rabbit.

To avoid the criticism that excessive cholesterol might be responsible for arteriosclerosis which might develop, I fed a second group of animals upon a protein diet of oats. There is little or no cholesterol in oats. In each of these first two diet groups the urines obtained were excessively acid. The disturbance of the acid-base balance of the body that follows the continued ingestion of diets rich in protein may, in part, be responsible for the blood vessel and kidney degenerations which result and for increase in blood pressure which was found to occur in these groups of animals. (Note: For the method of taking blood pressures in rabbits and for increase in blood pressures observed, see previous publication in the Archives of Internal Medicine, April, 1925, 35:492.<sup>2</sup>)

A third group of twelve animals was placed upon a soy bean diet. This, again, was a diet containing approximately 40 per cent of protein and little or no cholesterol. The urines from these animals were excessively alkaline, in contrast to the acid urines obtained from the other types of proteins fed the preceding groups. An increase in blood pressure was likewise obtained in this group, but to a less extent than the others. In none of the twelve instances was a true arteriosclerosis found. In two a spontaneous type of arteriosclerosis was present. This consisted of a necrosis of the smooth muscle cells of the media of the aorta, and resulted in a thinning of the aorta in contrast to a thickening as occurs in human sclerosis and types of sclerosis obtained in groups one and two.

A control group of twelve animals, kept upon a mixed diet for a period of two years, presented no increase in blood pressure and no instance of sclerosis.

#### OBSERVATIONS

*Liver Diet*—The aortas of seven rabbits of a group of ten kept upon a liver diet for from three to eleven months presented extensive arteriosclerosis. Three rabbits on this diet for a period of less than three months did not present evidence of blood vessel change. Grossly, the intima of the aorta presented raised yellow-white areas which in some instances involved the entire lumen of the vessel and extended in patches from the root to its iliac bifurcation. In one instance the pulmonary artery was also involved. Microscopically this process of intimal change has been followed from an early swelling of the intercellular cement substance of the

intima to a very marked thickening with the deposition of calcium soap in very considerable amounts. In the later stages of intimal swelling the elastic fibers become destroyed and the cellular structures are replaced by a homogenous hyaline-like material. It is in this hyaline substance that the calcium is found. Not until the intimal changes have reached an advanced stage do the endothelial cells covering the intima break down. In some instances of advanced change in the intima these degenerative processes have extended by continuity into the media, but never extensively. The intimal changes were particularly prone to occur about the mouths of the coronary and intercostal arteries—that is, at points of stress. In each of the seven liver-fed animals in which sclerosis of the aorta was found, sclerosis of one or both coronary arteries was likewise present to a very considerable degree. The microscopic picture of the coronary sclerosis was precisely like that of the aorta.

*There was no evidence of spontaneous (medial) sclerosis in any animal of the liver group.* In spontaneous sclerosis the changes are confined to the media and consist of a necrosis of the smooth muscle cells and of a deposition of calcium in the necrotic areas. The overlying intima is not involved. On the frequency of this condition in rabbits there have been many reports, but nearly all lack a careful study of the histology, and the writers therefore have failed to recognize these two types of sclerosis. The literature on this question has recently been summarized by Newburgh and Clarkson.<sup>4</sup>

The blood pressures in this group were higher than in any other and were highest in those animals in which the sclerosis was most marked. In each of these animals there was also very definite evidence of kidney injury as shown by the presence of albumin and casts in the urine and by an increase of nonprotein nitrogen and urea nitrogen in the blood. The urines of these animals were decidedly acid, the Ph. ranging from 5. to 7. The CO<sub>2</sub> of the blood serum was decreased.

*Grain Diet*—The aortas of seven of eleven animals kept upon an oat diet for two years (with the addition of green vegetables at stated times) presented marked arteriosclerosis. These changes were most pronounced in the arch and extended down into the abdominal aorta as isolated scattered patches. These patches, as in the liver group, were especially to be found about the mouths of the intercostal vessels. The coronary arteries contained areas of sclerosis in three of the seven instances that presented aortic changes.

*Spontaneous or medial sclerosis was present in three of the seven animals that had an intimal sclerosis.* This type of change presents grossly a thinning of the wall of the aorta in contrast to a thickening such as occurs in arteriosclerosis.

The most pronounced arteriosclerosis was found in those animals which had been on the grain diet for the longest time (two years). It was these animals, also, that had the most marked increase in blood pressure, the maximum pressures ranging between 90 and 100 mm. hg., whereas the pressures of these animals at the beginning of the experiment, and the pressures of the control animals, averaged



74 mm. hg. The kidneys of these grain-fed animals that presented areas of sclerosis and increased blood pressure likewise gave evidence of injury. Albumin and casts were present in the urine after the sixth month of the experiment. The urine was acid, the pH ranging from 6. to 6.8. The  $\text{CO}_2$  of the blood serum was decreased. The nonprotein nitrogen and the urea nitrogen of the blood were increased.

**Soy Bean Diet**—A third group of twelve animals was kept upon a diet of ground soy beans for two years. (At weekly intervals greens were added to this diet to prevent deficiency diseases.) The protein in this diet averaged 36 per cent and was of the vegetable type. It was given because it produces a very alkaline urine in contrast to the acid urines that the other two groups of protein produce. The pH of the urine of this soy bean group averaged 9, which is high even for the rabbit, whose urine on a herbivorous diet does not exceed a pH of 8. *Not one of the twelve animals in this group presented true arteriosclerosis.* Three presented areas of spontaneous or medial sclerosis.

**Controls**—A group of twelve control animals was kept under the same living conditions as the above groups and fed upon a mixed diet of oats, alfalfa, and greens. At the end of the two-year period they were killed. No sclerosis of either type was found in either aorta or coronary arteries. The blood pressure averaged 74 mm. hg., which is normal. The urines did not give evidence of kidney damage. The nonprotein nitrogen and urea nitrogen of the blood remained normal.

#### DISCUSSION

The term arteriosclerosis has been employed here because of its general use, although Marchand's term, atherosclerosis, more accurately describes the pathology.<sup>3</sup>

The earliest changes visible at autopsy consists of small raised yellow specks in the intima. This is due to a deposition of fat droplets containing cholesterol esters in the extracellular cement substance of the intima, secondary to a loosening and swelling or thickening of the intima.

These early changes may regress or may progress. In the latter event the cement substance fuses into a hyaline mass. The surrounding connective tissue is stimulated by this process, and these areas become covered with newly formed connective tissue. This new connective tissue swells and a deposition of hyaline material again occurs. Thus, layer is added to layer. In this area the deposition of fatty substances continues until the tissue cells and intracellular substance becomes so overloaded with fatty material that necrosis occurs. The cholesterol esters split up. Cholesterol is freed and precipitates out as crystals. The liberated fatty acids form soaps, the calcium soap leading to the incrustation and calcification which characterize the atheromatous ulcer.<sup>7</sup>

Many of our animals presented arteriosclerotic changes, the counterpart of human sclerosis, as described above. In the aortas of these animals the earliest lesion was found to be primarily the swelling of the intercellular cement substance. This was followed by a deposition of fat substances, of hyaline

material and, finally, of calcium soaps. These changes occurred with greatest frequency in those animals upon a 20 per cent liver protein diet in which the most marked increase in blood pressures were obtained, whose kidneys gave evidence of a nephritis and whose blood gave evidence of retained end products of protein metabolism. The urines of these animals were continuously very acid.

We attempted to determine whether the factor of disturbed acid-base balance as expressed by the long-continued secretion of excessively acid urine might in itself be responsible for the increased blood pressure and the degenerative blood vessel changes. To this end, the high protein (36 per cent) soy bean diet was given. The vegetable protein resulted in the excretion of a urine whose pH held around 9. The  $\text{CO}_2$  of the blood serum averaged almost twice as high, 59 vol. per cent as against the control animals, 30 vol. per cent. While there did occur *clinical evidence of kidney damage and an increase in the blood pressure, yet no instance of intimal arteriosclerosis* was found in any of the twelve animals of this group. One would expect kidney damage from the long-continued alkalosis that resulted from the soy bean diet. Fischer has shown that excessive alkali is capable of producing a nephritis. Henderson has completed work which permits of the same conclusion. Our experiments show clearly that a long-continued disturbance of the acid-base balance of rabbits on the alkaline side is capable of causing a moderate hypertension and of causing kidney damage, but that it does not produce arteriosclerosis. The absence of arteriosclerosis may have been due to the fact that the blood pressure was not sufficiently increased in height or long enough maintained to produce this change.

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#### DISCUSSION

W. T. CUMMINS, M. D. (Southern Pacific Hospital, San Francisco)—The increasing incidence of cardiovascular disease renders pertinent its clinical and experimental study. Much has been evaluated in cardiac investigation by instrumentation, and various methods have been learned and perfected in the study of sclerosis of the vascular system and the coincidental or eventual kidney involvement. Hypertension was discovered, and its volumi-

nous literature attests to its importance among the symptoms of cardiovascular disease. Toxins have been shown to be etiological in arteriosclerosis and kidney disease, and it is most likely that focal infections do play a rôle in the production of hypertension. Cholesterol, as an etiological factor, demands much more investigation. Excessive food proteins have been considered for a long time irritating to the kidneys and, more recently, as distinct disturbers of the acid-base balance. Of the three outstanding theories for the production of hypertension, as mentioned by Doctor Nuzum, focal infections and excessive food proteins appear to be factors, perhaps acting separately or conjointly, in the writer's opinion. However, for the study of many of our problems we wish to make animal investigations. Several years ago the writer studied the effects of adrenalin injections in rabbits and found arteriosclerosis. We apparently prevented its development by using coincidentally potassium iodide. At that time we did not seriously differentiate the so-called spontaneous or natural arteriosclerosis of rabbits from the experimentally induced type. This differentiation has been well noted by Nuzum in the study of his lesions. In contrast with some of the other investigators, Nuzum has been mindful of well-balanced diets and has studied a liberal number of animals including controls. The coronary sclerosis in his liver-fed animals is a good reproduction of the human type, and was not found in our experimental work. Furthermore, he has produced pathology with evidences similar to human cardiovascular and renal disease, viz., hypertension, acid urine, albuminuria, cylindruria, decreased carbondioxide content of the blood plasma and other signs of retention, such as increased blood urea nitrogen and nonprotein nitrogen. This is indeed a formidable array of evidence.

The writer considers that this is a most interesting and valuable experimental study and hopes that the work may be continued. A study of the activity of bacterial and food proteins separately and conjointly in experimental vascular pathology as to quantitative results might prove of value.

NEWTON EVANS, M.D. (Loma Linda, California)—Some of the questions about arterial hypertension, kidney damage, and arteriosclerosis are elucidated by Doctor Nuzum's study. It presents much food for thought, but it is evident that much of the problem is still unsolved. His clear presentation of the differences between the endarteritis apparently resulting from the abnormal diet and the spontaneous medial arterial changes in rabbits is convincing.

His main contention that *atherosclerosis* is directly related to the disturbance of the acid-base equilibrium of the body, particularly on the acid side, seems consistent with the observations on the animals used. What the real relationship between morphological kidney changes, arteriosclerosis and high blood pressure are, is still apparently far from settled. Since his observations seem to indicate that in all three groups of animals fed upon abnormally high protein rations there were seen *high blood pressure and signs of nephritic changes* irrespective of whether the animal was overacid or overalkaline, one might still be justified in suspecting that the high protein is in some way responsible for these effects.

If the acid-base equilibrium disturbance could be experimentally maintained without the use of excessively high protein ration, the result might give information of a more conclusive nature on the point stressed by Nuzum.

One cannot but feel that perhaps conclusions would be more valuable if an animal such as the rat, whose dietary apparently more nearly resembles that of man, were used as was done by McCollum and his associates, as well as by Risley and me, in observing the effects of high protein upon kidney structure and function.

A. M. MOODY, M.D. (Saint Francis Hospital, San Francisco)—I believe that Doctor Nuzum has produced in his experimental rabbits an arteriosclerosis typical, grossly and microscopically, of that seen in man. This work also sets forth very clearly the differences between the spontaneous type of arteriosclerosis and the type artificially produced in rabbits. There is, however, much work still necessary to prove conclusively whether the changes present are the result of a disturbance of the acid-base

equilibrium or whether they are the result of the action of toxic substances produced somewhere by the improper splitting and subsequent disposition of the protein molecule after ingestion. This work would also tend to prove that there is some difference in the changes occurring in rabbits fed largely on vegetable protein and in those fed on animal protein. The determination of causes—of which there must be many—of arteriosclerosis is an enormous problem, and Nuzum's work presents important evidence of the association of an acid-base disturbance with arteriosclerosis and high blood pressure.

## SUPERFICIAL EPITHELIOMATA

A REVIEW OF THE CASE HISTORIES OF PATIENTS TREATED IN THE OUT-PATIENT DEPARTMENT OF THE UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL BETWEEN 1920 AND 1926

By C. J. LUNSFORD AND LAURENCE TAUSSIG\*

DISCUSSION by W. F. Howard Taylor, Los Angeles; Douglass W. Montgomery, San Francisco.

THE material for this paper was drawn from 230 histories of patients applying to the clinic for treatment of basal and squamous-celled epitheliomata between 1920 and 1926. We have attempted to demonstrate, principally by means of tables, some of the instructive features revealed by a careful study of these histories. In many instances the records were not complete, and in many more the patients were lost sight of too early to judge the final result of treatment. We have emphasized the differentiation between basal and squamous-celled growths on account of the relative benignity of the first in comparison with the latter. Most of the patients whose records were reviewed were first seen and were treated in the dermatology clinic, though a number were referred to the surgical department. Of those treated in the skin clinic the greater number received radium therapy, often in conjunction with x-ray, curettage, cautery, dessication or surgery. The number of patients is too small to compare the various methods of treating the different types of lesions and we have avoided making such comparisons.

### AGE INCIDENCE

In Table I we have indicated the incidence of basal-celled and squamous-celled epitheliomata by decades. It will be noted that about 10 per cent of the squamous-celled growths occur before the age of 40, while only about 1 per cent of the basal-celled growths occur during this period. On the other hand, 30 per cent of the basal-celled new growths occurred after the 70th year; while only 21 per cent of the total number of the squamous type occurred at this time. It is of interest to note that the peak of the incidence in this series of skin and mucous

\* Charles Julian Lunsford (University of California Hospital, San Francisco). M.D. University of Pennsylvania 1923; A.B. University of Colorado. Graduate study: San Francisco General Hospital, 1923-24; Resident in Dermatology, Barnard Free Skin and Cancer Hospital, St. Louis, 1924-25; Assistant in Dermatology, 1925-26. Present hospital connections: University of California Hospital. Present appointments: Assistant in Dermatology University of California Hospital. Practice limited to Dermatology since 1924.

Laurence R. Taussig (334 Post Street, San Francisco). M.D. University of California, 1918; A.B. and M.S. University of California. Present hospital connections: Instructor in dermatology, University of California. Scientific organizations: San Francisco County Medical Association, California Medical Association, American Medical Association. Practice limited to Dermatology since 1919.



TABLE I—According to AGE

YEARS	BASAL CELL		SQUAMOUS CELL	
	No.	%	No.	%
20-30.....	1	1.1	1	.7
31-40.....	0	0	13	9.2
41-50.....	12	13.7	22	15.6
51-60.....	23	24.1	41	29.
61-70.....	27	31.	34	24.1
71-80.....	20	23.	25	17.7
80 up.....	6	7.	5	3.5
TOTAL.....	89	100%	141	100%

membrane new growths occurs during the fifth and sixth decades, whereas the incidence of cancer in general is usually considered to be somewhat lower.

## SEX INCIDENCE

Table II indicates that of the total basal and squamous-celled epitheliomata, 70 and 95 per cent, respectively, occur in men. The seven to three ratio of the basal-celled cases is in keeping with the usual understanding. Of the twenty cases of squamous-celled epitheliomata occurring on the glabrous skin three only occurred in women. Of the sixty-six lip epitheliomas three were in women. Of the twenty-three tongue carcinomas one was in a woman, and of the thirty-two mouth cancers, other than of the tongue, none occurred in women.

## INCIDENCE ACCORDING TO LOCATION

The incidence of basal and squamous-celled growths according to the location of the lesion is indicated in Table III. It will be seen that on the face, other than the ear, the ratio of basal to squamous-celled lesions is six and one-half to one, while on the ear the ratio is reversed, being three and one-half squamous to one basal. This is in accordance with the usual statistics. One hundred per cent of the growths on the mucous membranes were squamous-celled in this series. Included under epitheliomata of the skin are several basal-celled growths which originated on the skin of the lips and later spread to the vermilion border, finally extending to the gum. Of the basal-celled epitheliomata of the face about 60 per cent were on the nose and cheek. Many of these involved the naso-labial fold and extended in all directions. Of the remainder about ten occurred near or at the inner canthi of the eyes, often extending to the eyelids and to the bridge of the nose.

## DURATION BEFORE APPLYING FOR TREATMENT

Table IV is a graph of the basal and squamous-celled epitheliomata according to the limits of and average duration of time the lesions had existed at the time the patient first visited the clinic. Comparing the two it will be noted that of the basal-celled growths the extreme limits of time are three months and eighteen years with an average of four years, and that of the squamous-celled growths between three weeks and eight years with an average of thirteen months. This indicates the type of case our clinic receives for treatment and explains the relatively small number of cures we have obtained.

## RESULTS OF TREATMENT OF EPITHELIOMATA OF THE GLABROUS SKIN

Table V shows that of all cases of basal-celled epitheliomata, a clinical cure has been obtained in 67 per cent. Closer analysis of the histories shows that of the cases of basal-celled epitheliomata applying for treatment during the first year, a clinical cure was obtained in 100 per cent. Those coming for treatment after a duration of five years or those who had received previous ineffective treatment were about twice as difficult to cure. The squamous-celled lesions which we apparently cured had a history of less than two years' duration.

In our tables "clinical cure" means freedom from symptoms for at least one year. "Question" means that the patient had not been under observation for a sufficient length of time to permit a correct estimate of the effects of treatment.

## RESULTS OF TREATMENT IN SQUAMOUS-CELLED EPITHELIOMATA OF LOWER LIP

In Table VI we have classified the cases of squamous-celled epitheliomata of the lower lip into (1) those without demonstrable metastasis; (2) those with demonstrable metastasis; and (3) those regarded when first observed as being hopeless and which received palliative treatment only. Of those without demonstrable metastasis practically one-half were clinically cured at the time of their last visit. The period over which they were observed after healing is shown by glancing at the chart. Many of them have not been seen in months and some not in years; therefore, their ultimate fate is unknown. Nine out of forty-seven, however, were well after the lapse of a year. Seven did not respond favorably to treatment and presumably died of cancer.

Under "questionable cases" is included four patients in various stages of involvement referred to surgery and two referred to other hospitals. The

TABLE II—According to SEX

LOCATION	BASAL				SQUAMOUS			
	MALE		FEMALE		MALE		FEMALE	
	No.	%	No.	%	No.	%	No.	%
Face, other than lips and ear.....	61	67.8	26	29.9	11	7.9	2	1.4
Lips.....	0	0	0	0	63	43.9	3	1.4
Ear.....	2	2.3	0	0	6	4.7	1	.7
Tongue.....	0	....	0	0	22	16.6	1	.7
Mouth other than tongue.....	0	....	0	0	32	23.7	0	...
TOTAL.....	63	70.1%	26	29.9%	134	95	7	5%

TABLE III—According to LOCATION

	BASAL		SQUAMOUS	
	No.	%	No.	%
Face, other than ear...	87	87%	13	13%
Lip—lower.....	0	...	66	100%
Ear.....	2	22%	7	78%
Tongue.....	0	...	23	100%
Mouth, other than tongue.....	0	...	32	100%
TOTAL.....	89	39% of whole	141	61% of Whole

others were not under observation long enough to permit any estimate of results. Of the sixteen patients with demonstrable metastases one shows a four-year cure, five were worse under treatment, and ten did not return to the clinic for observation. The chart shows that the squamous-celled epitheliomata of the lip have a poor prognosis after metastasis has occurred.

#### RESULTS OF TREATMENTS OF EPITHELIOMATA OF THE MOUTH OTHER THAN THE TONGUE

In Table VII we have classified the patients into (1) those whose tumors were clinically localized; (2) those in whom the local growth was either extensive or in which there was a demonstrable metastasis; and (3) the hopeless. Of the eight patients with relatively localized tumors two show a two-year clinical cure and one a four-year clinical cure. Many of those listed under "extensive" were, in fact, hopeless from the beginning, and a clinical cure was obtained in none. Three improved and nine grew worse while under treatment, but were lost from observation before final results could be noted. The eight patients listed under "question" did not remain long enough under observation for complete treatment to be given.

It was not thought worthwhile to chart epitheliomata of the tongue. Nearly all such patients were far advanced when first observed. Many are listed as hopeless. A large number of them did not return after the first or second treatment and were thus lost sight of before the effects of treatment were known. Of the twenty-three patients studied one shows a five-year cure. The treatment was implantation of bare tubes of emanation in the local growth, followed by neck dissection. Nine grew worse under observation; nine did not remain under treatment long enough to permit of adequate observation; and four were listed as hopeless when first seen.

*Summary*—A study has been made of 230 cases of superficial epitheliomata. Separate analysis are made of the basal and squamous-celled types and of those of the skin and of the mucous membrane. Comparisons were based on age, sex, location, duration of time and primary end-results of treatment.

*Results*—Skin cases: Of the 109 skin cases 89 basal-celled epitheliomata show a 67 per cent cure, and 20 squamous-celled epitheliomata show a 55 per cent one to five-year cure.

*Mucous Membrane Cases*—Sixty-six squamous-celled epitheliomata of the lower lip show a 15 per cent one to four-year cure; 23 tongue cases show a 4 per cent five-year cure; and 32 mouth cases show a 9 per cent two to four-year cure.

#### CONCLUSIONS

The following conclusions are based on the data obtained from the tables:

(1) Squamous-celled epitheliomata of the skin occur at an earlier age than do basal.

(2) Men are two and one-third times as susceptible to basal-celled epithelioma and nineteen times as susceptible to squamous-celled epithelioma as are women.

(3) There are more basal than squamous-celled epitheliomata of the skin, excluding the ear. Most of the epitheliomata of the ear are squamous celled.

(4) Squamous-celled epitheliomata grow more rapidly and are more resistant to therapy than basal.

(5) A clinical cure is obtained in a larger proportion of basal-celled epitheliomata than in squamous.

(6) Patients having received previous treatment respond less rapidly to a subsequent treatment than untreated ones.

(7) The older a lesion is the more difficult it is to effect a cure, whatever the pathology.

(8) A successful result is very difficult to obtain in epitheliomata involving the mucous membrane.

#### DISCUSSION

F. W. HOWARD TAYLOR, M.D. (C. C. Chapman Building, Los Angeles)—A statistical paper that is honest, especially when dealing with a subject such as superficial epitheliomata, is a real contribution of present-day medicine and surgery. Sometimes claims of cures are made in discussion, or even in papers which, when analyzed, reveal either an improper diagnosis, a failure to classify the types of malignancy, or exaggeration on the part of the speaker.

Doctors Lunsford and Taussig should be congratulated on this unbiased paper which not only gives accurate tabulations, but shows application and work in its preparation. Wisely the preference of various forms of treatment has not been brought out, eliminating considerable useless argument. Contrary to the claims of some who are over-

TABLE IV—According to DURATION BEFORE APPLYING FOR TREATMENT

	BASAL		SQUAMOUS	
	LIMITS	AVERAGE	LIMITS	AVERAGE
Face other than ear .....	3 mo.—18 yrs.	4 yrs.	3 wks.—5 yrs.	2 yrs.
Lip.....	0	0	3 wks.—8 yrs.	13 mo.
Ear.....	2-4 yrs.	3 yrs.	8 mo.—1 yr.	10 mo.
Tongue.....	0	0	1 mo.—4½ yrs.	1 yr.
Mouth other than tongue.....	0	0	1 mo.—2 yrs.	10 mo.
AVERAGE TIME—for all.....		4 yrs.		13 mo.



TABLE V—According to RESULTS OF TREATMENT OF CANCERS OF GLABROUS SKIN

	BASAL						SQUAMOUS					
	CLINICAL CURE		RECURRENT		QUESTION		CLINICAL CURE		UNIMPROVED		QUESTION	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Face, other than ear. . .	59	67%	17	19%	11	14%	7	54%	2	15½%	4	30½%
Ear. . . . .	1	50%	1	50%			4	58%	2	28 %	1	14 %

TABLE VI—CARCINOMA OF LIP—RESULTS OF TREATMENT

	No.	CLINICAL CURE							WORSE	QUESTION
		3 Mo.	6 Mo.	9 Mo.	1 Yr.	1½ Yr.	2 Yr.	4 Yr.		
No Metastasis. . . . .	47	9	5	1	1	3	4	1	7	16
Palpable Metastasis. . . . .	16							1	5	10
Hopeless. . . . .	3	Palliative Treatment								
TOTAL CASES. . . . .	66									

TABLE VII—Shows RESULTS OF TREATMENT of the LESIONS IN MOUTH OTHER THAN TONGUE

	No.	CLINICAL CURE		IMPROVED	WORSE	QUESTION	DIED
		2 Yr.	4 Yr.				
Relatively localized. . . . .	8	2	1	4		1	
Extensive. . . . .	20			3	9	7	1
Hopeless. . . . .	4						4

zealous for certain methods of handling these patients, this data will stand as an accurate guide to prognosis.

Most physicians who are treating squamous-cell epitheliomata even in its fairly early stage and without palpable metastasis are careful in treatment and are guarded in prognosis.

Eliminating the always present controversy of various methods of treating these lesions, there is nothing further I can add to this very complete and instructive paper.

DOUGLASS W. MONTGOMERY, M. D. (323 Geary Street, San Francisco)—The paper is an admirable estimate of cases in the experience of the authors themselves, and shows not only their experience, but also the good use they have made of their opportunities.

The division of epitheliomata into those that are squamous celled and those that are cuboidal celled is of more than academic interest, as the squamous-celled growths arise earlier in life, grow faster, and are more resistant to chemicals and to radiant energy than the cuboidal-celled ones. Because of their swifter growth, and the greater tendency to spread both locally and by metastasis, they are also more difficult to treat surgically. Another feature, however, of this cellular classification is that a particular growth may be not entirely one or the other, but may be mixed. It is only natural that this should be so, because the normal cells from which they all spring are not widely separated from one another, nor do they differ from one another very widely in their nature.

The subject of metastasis is important. An enlarged lymphatic nodule, even though adherent to the surrounding structures, and therefore not freely movable, and even if hard, and therefore indicating that it may be stuffed with dense hard epithelial cells, may be both indurated and attached because of inflammatory infiltration alone. Of course, the harder it is and the more immovable it is the likelier it is to be epitheliomatous, and when epitheliomatous infiltration has already extended as far as the neighboring lymphatic nodules the outlook for a cure is dark indeed.

The dangerous nature of these growths when situated on the auricle is justly referred to.

Of course, it is an important part of a well-rounded medical education that we should be aware of the difficulties of our occupation, but on the other hand it is not well that we should be too industrious in fabricating gloomy prognoses. If a steamship company should adver-

tise the dangers of the sea it would deter many from traveling. The statistics of nonsurgical treatment of cancer of the lip have of late years undergone a wonderful improvement, and even the very dangerous lesions of the mouth and tongue are, in some instances, not without hope, as these authors themselves have shown.

We have found in human life three most important factors in the production and control of its processes: (1) the application of energy of life from atoms; (2) the colloidal structure of the human protoplasm; and (3) the control exercised by the vegetative nervous system over these processes. These are the three great fundamental principles of life in the vertebrate, and a study of their action and deviation is necessary to the understanding of human vital processes. The control of the vegetative nervous system is largely in its action upon involuntary muscle, of which example is in the pupil of the eye, the heart, the muscles of our blood vessels (arteries, veins and capillaries). There are two kinds of muscles, voluntary and involuntary: the cerebrospinal system controls the voluntary. The latter is widely distributed in the human body, so that its control is most important. The capillaries of the circulatory system, where most of the interchange of substances with the blood goes on, have smooth muscles (called Houget cells) and, when it is considered that the capillaries in a small man have been estimated by Krogh at a total length of 62,000 miles, or two and a half times around the world, and their total area at 120,000 square yards, the influence of the vegetative nervous system in contracting and dilating these and its effect upon metabolism (or body processes), through this means alone, may be well appreciated. Its control over the heart, which normally pumps seven and one-half tons of blood a day, equivalent to lifting a ton of blood 122 feet high, is another example of its action.—Ellice McDonald, M. J. and Record.

A report of the tests recently made by the United States Public Health Service to determine the amount of danger involved from running a gasoline engine in a closed space states that a small twenty-three horse-power engine discharges one and a half cubic feet of carbon monoxide in a minute, or enough to poison the air of a closed garage, ten by twenty feet in size, to the danger point in about three minutes.—M. J. and Record.

## URINARY ANTISEPTICS

By GEORGE G. REINLE AND E. SPENCE DEPUY \*

DISCUSSION by Miley B. Wesson, San Francisco; H. A. Rosenkranz, Los Angeles; G. W. Hartman, San Francisco; Robert V. Day, Los Angeles.

HOW many patients with ureteral stricture, ureteral kink and such obstructive causes of pyuria are daily being treated by the administration of hexyl resorcinol?

How many patients with pyuria caused by calculus of the kidney, ureter or bladder are being treated by the administration of urotropine?

How many patients with urine cloudy with pus, due to tuberculosis of the kidney, are being treated by vaccine?

The figures are not available; no one knows them; but we do know that they are large and that the treatment above suggested is hopeless.

If such hopeless treatment is being carried out to the large extent that we have good reason to suspect, then the fault lies largely with the members of the California Medical Association, for it is not enough that we may know the limitations and contraindications to the oral, subcutaneous and intravenous administration of drugs, but upon urologists lies the duty of presenting these facts repeatedly to those members of the profession not engaged in restricted lines of practice and who naturally look to specialists for leadership in special lines.

If the physician to whom the patient first goes is of the opinion that the urine can be freed of pus by urinary antiseptics, it is because urologists have failed to make clear the very exceptional conditions under which urinary antiseptics may be of value.

It is the purpose of this paper to present some facts concerning sterilization of the urinary tract to those of our confreres who are usually the first to be consulted by the patients.

An infection of the urinary tract—considered quite apart from infection of the generative tract—is a problem we have had with us always, so from earliest days of empirical therapeutics, up to and through the present era of relatively scientific medicine, there has been a search for and a hope of finding some drug which will produce sterilization of the urinary tract.

We, as urologists, know the difficulties inherent in urinary tract sterilization, but these difficulties are not always appreciated by physicians whom the patient first consults, and who may conclude quite reasonably from much that is published that dyes for intravenous use, new drugs for oral administration, or some vaccine, will clear up the patient's pus and save him the inconvenience and expense of an urological investigation. Such conclusions are

erroneous, and what is more, are productive of harmfully lost time and an added burden of expense to the patient.

Drugs and therapeutic measures designed to sterilize the urinary canal may be classed as, (1) drugs administered orally, (2) drugs administered intravenously, and (3) drugs administered by instillation into some portion of the urinary tract directly—the kidney pelvis, the ureters, the bladder or the urethra.

It will greatly simplify matters if, as urologists, we take a position and maintain it by the positive statement that no one of these methods, nor all of them combined, has so far satisfied the ideal in accomplishing the desired result to perfection. We will have accomplished much good if we can succeed in fixing the idea that sterilizing the urinary tract is dependent upon much more than the choice of any drug. As there are two principal reasons why the above statement is true, we must lay particular stress upon the following facts: (1) urinary tract infections, if we exclude the urethra, are seldom primary, but are more often than not the reflection of some distant focal infection; (2) the kidneys, ureter and bladder often become infected by a bacterial bearing urine, which would pass harmlessly were it not for mechanical obstructions causing a stagnant urine somewhere along the tract. It is a primary thought of urologists that stagnant, or residual urines, at body temperature, are excellent culture media for many organisms, particularly the colon bacillus, whereas free flowing urine does not become easily contaminated, but commonly carries tremendous loads of bacteria beyond the body without infecting the membranes over which the flow takes place. This even includes the tubercle bacillus. But stagnant urine, even when confined to a space no larger than one of the minor calyces of the kidney becomes quickly a satisfactory media for bacterial growth. Well known as is this statement, its truth is not generally appreciated and given the practical consideration its importance demands.

Also, it seems well to emphasize that obstruction and consequent damming back may take place anywhere along the urinary tract, and from a variety of causes. Inflammatory swelling may be the cause of obstruction in one patient, while, in another, it may be stricture, kink, calculus or neoplasm. The site may be the kidney, ureter, the vesical neck or the urethra. It is well, then, to emphasize that wherever obstruction, even though only partial, exists, we will have stagnant urine, a favorable culture medium and, as a result, possible infecting of the membrane or viscus above the obstruction.

Of methods of administering sterilizing agents, the oldest is that of drugs by the mouth. Considering only those of modern times, we have as favorites quinin sulphate, salol, hexamethylenamin, acraflavin, and the most recent, hexyl resorcinol.

If we concede that hexyl resorcinol is the best possible urinary antiseptic for oral administration, it still leaves much to be desired, for it is not of universal application, nor does Leonard, the originator of the product, make such a claim for it, yet we find it in quite common use for every type of urinary infection of every conceivable cause. The

\* George G. Reinle (204 Dalziel Building, Oakland, California). M. D. College of Physicians and Surgeons, San Francisco, 1901. Graduate study: Vienna, 1911. Present hospital connections: Urologist, Samuel Merritt Hospital, Providence Hospital, Alameda County Health Center, Alameda County Receiving Hospital. Scientific organizations: Alameda County Medical Society, C. M. A., A. M. A., American Urological Association, Surgical Association of Oakland. Practice limited to Urology since 1916.

E. Spence DePuy (204 Dalziel Building, Oakland, California). M. D. University of California, 1894. Hospital connections: Urologist, Samuel Merritt Hospital; urologist, Providence Hospital. Scientific organizations: Alameda County Medical Society, C. M. A., A. M. A., American Urological Association, Surgical Association of Oakland. Practice limited to Urology since 1918.



merits of the drug are: It is stable; it is bactericidal in high dilutions of urine of any reaction (this last claim recently modified by Leonard); administered by the mouth, it is nontoxic; it is nonirritating to the urinary tract; and it is eliminated in high percentage by the urinary tract. But, and this is the point to which it seems we should frequently direct attention, Leonard specifically states that where there is no mechanical obstruction one may, under favorable circumstances, expect to sterilize the urine with hexyl resorcinol. Conversely, neither hexyl resorcinol, nor any other drug may reasonably be expected to overcome the handicap of mechanical obstruction and sterilize the urine under such conditions.

Henline, in reviewing the results of this new drug, in the *Journal of Urology*, states: "A rigid physical examination to eliminate focal infection is necessary, as well as a complete cystoscopic study." It is not reasonable to use hexyl resorcinol empirically, merely because there is pus in the urine, nor should one under such circumstances feel disappointment that results are unsatisfactory. Of therapeutic agents administered subcutaneously or intravenously, we have as outstanding examples, vaccines, and chemicals. Of the latter, the only one which it seems to us merits consideration is mercurochrome-220.

Of vaccines, it may be said that they have had their trial. Unfortunately, they are still more largely used than circumstances justify, that is to say, without investigation of the cause of urinary infection. In suitable cases, they have occasionally been successful—but certainly in no case where infection is due to or aggravated by mechanical obstruction.

Mercurochrome, evolved at the Brady clinic, has an undoubted place as a urinary antiseptic. We are beginning to pretty well appreciate the value of this drug, for both topical application and intravenous use, but the appraisal we place upon this agent is rather often misapprehended by physicians whose work is less restricted. Young, certainly, might be expected to claim for the drug all that can be hoped for from it, and, though he reports results accomplished with it by others which he has not himself duplicated, in his own investigations he limits himself to very careful statements. In a recent article his own words are: "There are a number of cases treated in the Brady Institute in which intravenous use of mercurochrome failed to effect sterilization." This tends to confirm the assertion that treatment must be based on recognition of the cause of the infection, and directed toward removal of obstructing factors.

As to drugs administered by instillation: The ones which have survived the severe trials of time are but three—nitrate of silver, silver colloids and mercurochrome.

With regard to the practical results in sterilizing the urinary tract by introducing these agents, each is probably equally serviceable, and each has its indications, though not one of them, through its action as a germicide alone, is sufficient to subdue infection. Realizing the fact that, to introduce these drugs it is necessary to pass an instrument into

the bladder, the ureter, or the kidney pelvis, it will be appreciated that by these procedures one has at least temporarily overcome mechanical obstruction and thereby measurably encouraged the escape of stagnant urine. The fact that at the same time one introduces a sterilizing agent is undoubtedly of some importance. But the point of the matter, as we see it, and which we think should be more generally broadcast, is that results are favorable not so much in proportion to the particular drug one employs, as to the success with which obstruction is overcome. A recent article by Davis, long associated with Young at the Brady Institute, thus summarizes the matter: "After careful thought, he makes the statement: 'At the present time there is no known drug which may be given by the mouth and which may be depended upon to prevent the growth and development of bacteria within the urinary tract.'" And adds: "Promiscuous medication with so-called urinary antiseptics without painstaking investigation to eliminate mechanical or systemic causes of infection is distinctly contraindicated."

May we not feel that upon urologists rests an obligation to keep continually before those whose treatment of urinary infections is only occasional the following facts:

It is always of importance to search for the cause of the infection, and that empirical drug administration cannot be relied upon to accomplish results which necessarily depend upon careful investigation and accurate diagnosis.

That it is always necessary to overcome urinary obstructions, whether in the urethra, at the bladder neck, in the ureter, or in the kidney before satisfactory results from germicides may be expected.

Whereas we have new drugs both for oral and intravenous administration, and these drugs represent undoubted progress and are exceedingly valuable therapeutic agents which make sterilization of the urinary tract less difficult than it has been in the past, even now such urinary sterilization is not an easy and simple procedure.

#### DISCUSSION

MILEY B. WESSON, M.D. (1275 Flood Building, San Francisco)—This is an exceedingly sane and constructive paper in that while the therapeutic merits of no drugs are endorsed or assailed, the reader's attention is focused upon the fact that indiscriminate drugging without a definite diagnosis is not only unscientific but inexcusable.

Dysuria and the presence of pus and organisms in the urine are not sufficient to warrant the indiscriminate use of the latest urinary antiseptics recommended by high-powered drug salesmen or newspaper propaganda. A diagnosis should be made before any therapy is instituted and if the attending physician is not equipped to make the diagnosis he should call in a competent urologist. A bacilluria may be transitory. Frequently, if there is an active focus of infection in the body, or more commonly constipation, due to a stasis of the colon with the resultant overloading, myriads of organisms are excreted through the kidneys. This process is harmless if the germs pass onward, but the reverse is true when there is a mechanical obstruction somewhere in the urinary tract, which permits of the formation of a residual puddle to function as an incubator for organisms.

Whenever a housewife finds an obstruction in the kitchen sink she immediately calls in a plumber to destroy the stricture and provide free drainage before serious trouble results. Not even the most ignorant layman would experimentally pour drugs at 10 cents a capsule four times a day for three months down a drain pipe to relieve an

obstruction of an unknown nature before consulting a hydraulic expert.

Pediatricians still "salt out" bacteria in pyelitis by the weekly use of sodium bicarbonate, alternating with urotropin and sodium acid phosphate. The procedure is generally satisfactory, but unfortunately, renal malformations with resultant pyonephrosis are relatively as common in children as in adults. In the past women were often "pronounced delicate" and in such cases "colds in the bladder" were a common complaint. Even today buchu or urotropin (in valueless 5 grains every four-hour doses) are prescribed for a cystitis without even an examination to determine whether the burning is due to a cancer in the bladder, tuberculosis of the kidney, or a highly concentrated acid urine.

Urinary antiseptics are of inestimable value and those who have introduced the various ones of proven merit have uniformly been very conservative in their statements of the therapeutic possibilities. However, all such drugs are in danger of being relegated to oblivion by the absurd claims of the over-enthusiastic pseudo-scientists who forget that no stream can be purified unless there is free drainage. It is just as unreasonable to attempt the cure of pyelitis by kidney lavage in the presence of a median bar at the vesical orifice as it is to clear up tuberculosis of the bladder, secondary to a renal infection, by the injections of Gomenol or Rivenol. Doctors Reinle and DePuy have very forcibly emphasized the fact that a diagnosis must be made, the focus of infection removed, free drainage provided and that not until then are urinary antiseptics in order.

H. A. ROSENKRANZ, M.D. (1024 Story Building, Los Angeles)—Experience has proved that it is always timely to emphasize fundamental facts. It is so pleasant for the human animal to speculate and gamble, in other words, to be empirical and to "try something" rather than to diagnose the cause of the infection and cure the patient by removing the cause. Humans love the occult and mysterious. Even we, as physicians find it necessary to have continually impressed upon us the necessity of keeping close to rational fundamentalism lest we get out of the habit of thinking logically—to approach the method of the charlatan, cultist, or faddist, who must do something for, or rather to his patient, on the strength of a guess diagnosis, either because diagnosis is beyond his ken or because it does not thrill his experimental, therapeutic form of mind, so that finally, the patient, his money gone, wonders what it has all been about and falls upon the idea that perhaps he needs a specialist to at least diagnose his case and perhaps, against the inclination of his own speculative and experimental form of mind, but out of economic necessity, seeks services at some state charitable institution where there is a staff of first-class specialists available.

How superfluous sound the admonitions: (1) Thou shalt not massage the prostate for tuberculosis of the kidney; (2) Thou shalt not massage the prostate for papilloma of the bladder; (3) Thou shalt not massage the prostate for prostatitis when the prostatitis is due to metastasis from peridental abscess, tonsillitis or other focal infection.

Cases like the above have been met with by me recently. The papilloma case had been massaged by a general practitioner for six months. An unusually severe bleeding finally scared the patient into consulting a specialist. The tuberculosis of the kidney case had been massaged for three months by a very good but too busy urologist. I am meeting with many cases of pus in the urine in which the pus is traced to the kidney or prostate, or both, and in which cases the primary focus is found around the teeth. I regard abscessed teeth to be the principal cause of kidney stone.

Doctor Wesson has aptly mentioned the rôle that colon bacillus plays in keeping up some kidney infections. About ten years ago at the California Medical Association meeting in Coronado, Doctor Stewart, I believe, read a paper on kidney infection. Dr. Charles Lockwood, in discussing the paper, stated that he had been successful in relieving or curing his patients, but that remissions occurred in a certain percentage. I followed Lockwood in the discussion and called attention to the good results that are frequently obtained by controlling constipation with castor oil and other intestinal eliminative measures, to cause elimination of the germs before they migrate through the eighth of

an inch that separates them from the kidney. At the present time I would amplify this by suggesting not merely removal of the focus in the intestine, but also that of the teeth, tonsils, etc. If cystoscopy would include more x-rays of the teeth and fewer pyelograms our diagnoses would be finer.

Urotropin! "What's in a name?" Not much, but enough to cause the laity and some of the physicians to prescribe it for any and every ailment of the urinary tract, even though a large percentage of the patients are uncomfortably and harmfully irritated (kidneys and bladder) an hour or two after each dose. Urotropin is, however, effective in many a case of chronic or subacute kidney infection caused by the colon bacillus.

Papers such as this, simply and tersely written, are truly educational to profession and laity alike. I feel that if we would all write in the simple and effective style that DePuy and Reinle have done, and if the papers were made accessible to the public, much good would redound to doctors and patients.

GEORGE W. HARTMAN, M.D. (999 Sutter Street, San Francisco)—The authors have again made a plea for accuracy in diagnosis, perhaps the most essential thing in current day medical progress. The refinements which have been introduced in the manufacture of drugs in recent years have reduced in a large measure their unfavorable actions and increased their therapeutic ones. This has had a tendency to encourage their exhibition at times in an effort to see "what they will do."

General practitioners are not to be scolded for making these therapeutic tests. It is not so long since, in the absences in more exact means, that this was an approved form of treatment. However, when one considers the changes which take place in drugs administered by mouth, passed through the digestive tract and eliminated via the blood through the kidneys, or in those carried through the blood stream to the kidney, or those carried directly into the kidney and coming in contact with diluting urine, he must realize that the action there is quite different from that in the laboratory, nor are all clinical applications identical. Even with the refinements of the newer drugs the possibility of injurious effects is to be considered. It is not always possible to destroy infection without some injury to the host; therefore, the importance of maintaining that accuracy of diagnosis far exceeds any other consideration.

It is incumbent upon urologists then, as the authors suggest, to bring to the notice of the general practitioner the most recent and modern means of diagnosis so that applications can be made as directly as possible and to involved regions, thereby effecting an economy of time, cost, and suffering. There is no part of the body in which mechanics plays a more important part than in the urological tract.

ROBERT V. DAY, M.D. (Detwiler Building, Los Angeles)—The paper of Doctors Reinle and DePuy is unusually timely. Oddly enough, doctors in general, when an opportunity presents, respond to a fad in just about the same way women respond to new styles in hats or other wearing apparel.

A long time ago abdominal surgeons discarded the use of bactericides in the abdominal cavity. Experience showed that all in all they did more harm than good. The same is true in most every branch of medicine, yet they want to touch the end of the rainbow and obtain miraculous cures in infection of the urinary tract by some unusual germicide.

In infections of the gall bladder, appendix, frontal sinus, tonsil, bone infections and so on down the line through most of the organs and tissues of the body, the doctor in charge relies first on the patient's resistance and second on drainage, whether by natural means or through a surgical procedure—this drainage often entailing the amputation of the organ, as appendectomy or tonsillectomy.

About the only exception to this rule is the employment of sprays by pharyngo-laryngologists which after all, are used not because they are germicidal but because of the anesthetic and soothing effects brought about principally through their action on the caliber of blood vessels.

Everyone, of course, uses iodine or some analogous chemical to sterilize the field of operation, but when once an infection is established in practically any organ, it is



beyond the reach of any loosely applied or internally administered germicide. The particular infestations for which we have chemical specifics, namely, malaria, syphilis, etc., are, if one recalls, not due to bacterial infection but to parasitic infestations other than bacteria. I know of no single disease against which there is a chemical specific, when that disease is caused by cocci or bacilli.

To look for these ideal shortcuts in urological practice often means that the one so looking is either lazy or dodging the issue. Accurate urologic diagnosis means precise and painstaking work. As a rule there is no substitute for this as a preliminary efficient therapy. It is a sad commentary on the physicians to be carried away by such fads simply because of glaring promises by enthusiasts.

## THE PRACTICAL VALUE OF THE INTRACUTANEOUS TUBERCULIN TEST

By ROLAND P. SEITZ AND LLOYD B. DICKEY \*

(From the Division of Pediatrics, Stanford University Medical School)

*In a small number of patients we find the size of the tuberculin reaction in children classified as active to be much larger than the average.*

*In our hands the D'Espine sign was valueless.*

*The extent of the bronchial markings in the roentgenograms of the chest may be significant in suspected tuberculosis. The amount of calcification showed no correlation with other evidences of tuberculosis.*

*The local incidence of tuberculous infection would seem to be about 25.2 per cent for all children under age fourteen and 42.6 per cent between twelve and fourteen. This is lower than reported for other urban communities.*

*We believe that a routine tuberculin test is warranted in all children regardless of their complaints.*

*A positive tuberculin test should indicate a complete investigation, including roentgenograms of the chest.*

DISCUSSION by Harold K. Faber, San Francisco; Clain Fanning Gelston, San Francisco; William C. Voorsanger, San Francisco.

SINCE Von Pirquet<sup>1</sup> first established, in 1908, a method to detect tuberculous infection by a skin test numerous reports have appeared in the literature.

The following study was undertaken with the support of the San Francisco Tuberculosis Association. The work was started to determine the incidence of this disease for this vicinity; to correlate the history, physical and radiological findings and from these to determine the practical value of the tuberculin test.

While the work is as yet only in the initial stage, enough data have accumulated from which, we think, to draw preliminary conclusions.

In our study five hundred children, ranging in age

from infancy to fourteen years, were tested. They were from the Stanford children's clinic, unselected, and taken regardless of complaints. The intracutaneous method was used and a uniform standard dose was given. This was 1/10 cc. of a 1:1000 solution of Koch's old tuberculin in normal saline thus making a standard of 1/10 mg. of tuberculin for each patient. The test was done on the flexor surface of the forearm and controlled with an intracutaneous injection of 1/10 cc. of normal saline solution, given at some distance below the tuberculin test.

Happ and Casparis<sup>2</sup> advise the use of a control solution containing an amount of glycerine broth equivalent to that in old tuberculin. The use of a control while theoretically correct is not a matter of general practice, probably because protein reactions, such as might be obtained from broth without bacterial growth, fade quickly and have disappeared at the end of the twenty-four or forty-eight hours when clinic patients present themselves for inspection. In hospital patients it is not uncommon to see these transient reactions.

An erythema five mm. in diameter at forty-eight hours was taken as the minimum positive tuberculin reaction. On those patients with positive reactions a history was taken, a physical examination performed and a roentgenological examination made of the chest. An attempt was made also to obtain body temperature at four-hour intervals over a period of five days. This was found to be impractical, as were sputum examinations, except in patients who later entered the hospital.

Of the five hundred children tested 126, or 25.2 per cent, reacted positively and 374, or 74.8 per cent, negatively.

The age incidence of the positive ones was tabulated with the following result:

TABLE I

Age	Male			Female			Total		
	No. done	No. pos.	% pos.	No. done	No. pos.	% pos.	No. done	No. pos.	% pos.
Under Age 4.....	47	8	17.0	62	4	6.4	109	12	11.0
4 to 8.....	98	24	24.5	95	22	23.2	193	46	23.8
8 to 12.....	81	26	32.1	63	19	30.2	144	45	31.2
12 to 14.....	31	14	45.2	23	9	39.1	54	23	42.6
Totals .....	257	72	28.0	243	54	22.2	500	126	25.2

If this incidence is graphically charted (Chart I), it shows a steady rise in the percentage of positive reactions directly proportionate to the ages of the patients male and female.

The rest of this paper will deal entirely with patients who reacted positively; study of negatives is pending.

Attention was concentrated on the tuberculin reaction. In nearly every instance induration was present with a considerably larger area of erythema peripheral to it. The induration was considered the more significant and formed the basis for our measurements. It averaged a little less than 14.5 mm. in diameter. The six patients with active tuberculosis averaged nearly twice this or 23.5 mm. Three of these had active bone foci in addition to those in the lungs.

Analysis of the histories of the positively tuberculous patients revealed that the total number of males was approximately 28 per cent of those tested, females, 22 per cent.

About 60 per cent of all patients gave no history

\* Roland P. Seitz (490 Post Street, San Francisco). M. D. Stanford, 1923. Graduate study: Division of Pediatrics, Stanford University Medical School, 1923-26. Present hospital connections: Stanford University Hospital. Scientific organizations: San Francisco County Medical Society, C. M. A., A. M. A. Present appointments: Chief of Clinic and Clinical Instructor of Pediatrics, Stanford Medical School. Practice limited to Pediatrics.

Lloyd B. Dickey (Stanford University Hospital, San Francisco). M. D. University of Minnesota, 1923; A. B. Fargo College, 1915; M. A. University of Illinois, 1917; B. S. University of Minnesota, 1921; B. M. University of Minnesota, 1923. Graduate study: State Hospital for Crippled Children, Phelan Park, St. Paul, Minn., 1923; Hennepin County Tuberculosis Sanatorium, Oak Terrace, Minn., 1923; Lane Hospital, 1924-26. Previous honors: Graduate Assistant in Zoology, University of Illinois; Instructor in Anatomy, University of Minnesota; Assistant in Medicine, University of Minnesota; Assistant in Morphology, Puget Sound Marine Biological Station. Present hospital connections: Lane Hospital, Pediatrics. Present appointments: Instructor, Department of Medicine, Division of Pediatrics, Stanford Medical School. Practice limited to Pediatrics since 1924.

of exposure to tuberculosis, 23 per cent a definite history. Of the latter, 3 per cent had a history of double contact. In slightly over 7 per cent the history was doubtful and in about 9.5 per cent it was unknown.

Complaints at the time of examination were varied. Eleven, or slightly over 8.5 per cent, of the 126 positives came to the clinic for examination because of exposure to tuberculosis in the home. Of the remaining patients 27, or about 21.5 per cent, had complaints which might be considered suggestive of a tuberculous infection. Chronic cough, failure to gain weight, marked underweight, night sweats and hoarseness were among these. Eighty-eight patients (about 70 per cent) had complaints not suggestive of tuberculosis.

Since both measles and pertussis have been said to predispose to tuberculosis infection we obtained, where possible, the history in regard to these infections: 62 per cent had a history of pertussis, 21 per cent negative and in 17 per cent the history was unobtainable. Fifty-eight per cent had had measles, 25 per cent negative, and in 17 per cent the history was not obtained.

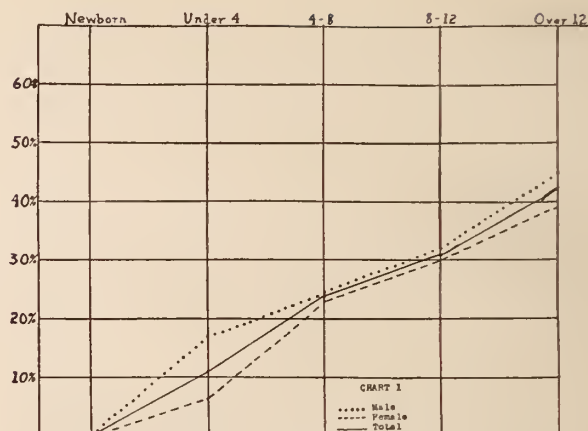
In only seven patients, slightly over 5 per cent, could we obtain a history of phlyctenular conjunctivitis. Of these, five were of girls and two were of boys, the youngest  $2\frac{1}{2}$  years.

Of the patients examined, about 39 per cent had had their tonsils and adenoids removed. In the remainder these might be considered as a focus of infection.

In considering the weights, we arbitrarily accepted all that were less than 10 per cent above or below the average for height, age and sex, as normal. Baldwin-Wood standard weight tables were used to determine variations. Eighty-six patients, or 68.2 per cent, were within the standard limits of normal weight; twenty-six patients, or about 20.5 per cent, were 81 to 90 per cent of average weight; Four patients, or over 3 per cent, were 80 per cent or under. Six patients, or 4.7 per cent were 111 to 120 per cent of average weight; in two the weight was over 120 per cent of the average, and in two the weight was not taken.

Many of our patients were children too young to permit the elicitation of the whispered or spoken voice and in them we considered dullness at, or below, the spine of the fourth thoracic vertebra as equivalent to a positive D'Espine sign. In the remainder, the complete D'Espine Test was carried out by means of the spoken and whispered voice. Thirty-three, or about 26 per cent, gave a positive D'Espine Sign. Of these, 16 showed signs of enlarged tracheo-bronchial nodes in the roentgenograms and 17 did not. In 83 or about 66 per cent of the children examined, the D'Espine sign was negative. Thirty-one of these, or 24.5 per cent, gave roentgenological evidence of tracheo-bronchial glandular enlargement, and 52, or about 41 per cent, were negative. In ten patients it was not possible to examine for this sign.

These results make it evident that the D'Espine sign was of doubtful value in this series. This was also the finding of a committee appointed by the National Tuberculosis Association.<sup>3</sup>



Definite paravertebral dullness was present in ten of the children examined; 47, or about 37 per cent, showed radiological evidence of enlargement of the tracheo-bronchial lymph glands, and 69, or about 55 per cent, showed no such evidence, in ten, roentgenograms were not taken.

The extent of the bronchial markings in the lung fields was noted. These were grouped into three classes on the basis of their extent into the lung parenchyma. The lung fields were divided into thirds by lines concentric to the outline of the chest. The inner field was called the first; the intermediate the second and the peripheral one the third.

Of 121 patients in whom roentgenograms were taken, six, or about 5 per cent, showed bronchial markings extending only within the limit of the first field; 94, or over 77 per cent, extended into the second zone and 21, or about 17 per cent, ran into the third.

The amount of calcification was graded by counting the actual number of apparently calcified areas in the lung fields. The findings were placed in three groups. Those having three or less of these areas were graded one plus; those having more than three and less than twelve, two plus; and those having more than twelve, three plus. Of the 121 children, three showed no discernible calcification; 23, or 19 per cent, were placed in the first group; 76, or about 63 per cent, in the second group and 19, or 15.7 per cent, in the third group.

We searched in every roentgenogram for a primary parenchymatous lung focus such as Ghon<sup>4</sup> demonstrated to be present in nearly every child with tuberculosis. All areas of calcification outside of the hilus region were accepted as primary foci except old calcified cavities which were almost certainly tuberculous. Doubtful areas were not included. Eighty-seven, or 72 per cent of our children, showed one or more lesions such as we have mentioned and 34, or 28 per cent, were negative. Only two had cavities and in one of these the cavity was almost certainly healed.

On the basis of all the data at hand, namely, the history, physical examination and roentgenogram, we attempted to classify patients as either active, suspicious or healed. This was done without reference to the tuberculin test. No child was found who could be considered absolutely negative: six, or 5 per cent, were placed in the active group; 24, or 19 per



cent, in the suspicious group and we concluded that 91, or 76 per cent, had healed lesions.

It will be noted that all of the patients with positive tuberculin reactions showed other evidence of tuberculous infection. The 42.6 per cent between 12 and 14 years who reacted positively might therefore indicate the incidence of tuberculous infection for the residential area at this significant age period. This incidence, 42.6 per cent, is much lower than that usually reported with the less sensitive Von Pirquet test for this age group. Such studies from the larger cities are shown in the following table:

TABLE 2

Author	Date	Location	Age Yrs.	Num-ber tested	Per cent positive
Hamburger and Monti <sup>5</sup>	1909	Vienna	12-14	*53	94.3
Von Pirquet <sup>6</sup>	1907-08	Vienna	12-14	81	81.5
Hoffa <sup>7</sup>	1919-21	Barmen	11-14	206	63.1
K. Barchetti <sup>8</sup>	1917-21	Gratz	11-14	158	58.0
Ferguson <sup>9</sup>	1921	Saskatchewan	10-14	795	57.4
Veeder and Johnson <sup>10</sup>	1915	St. Louis	12-14	*112	48.0
Sill <sup>11</sup>	1918	New York	10-13	27	48.0
Furstner-Risselada <sup>12</sup>	1921	The Hague	12-13	117	46.3
Slater <sup>13</sup>	1924	Minnesota, rural	12-14	383	12.0

\* Hospital children.

In those children reacting positively we wish to emphasize the relative importance of certain roentgenological findings in diagnosis.

While only 13.2 per cent of our patients with healed lesions showed increased bronchial markings extending into the third zone, 25 per cent of those with suspected tuberculosis, and 50 per cent of the active ones, reached this area.

The amount of calcification was not, however, as helpful. Sixteen and three-tenths per cent of those children with healed lesions showed the same marked degree of calcification as that noted in a similar proportion of those with suspected and of unquestionably active tuberculosis.

We advocate a routine tuberculin test on every child. We feel that most of the thirty with active and suspicious tuberculosis, constituting 34 per cent of the positive reactors and 6 per cent of the 500 children tested, would have escaped detection or diagnosis for a much longer period were it not for the thorough examinations they were given simply because of the positive skin tests.

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## DISCUSSION

HAROLD K. FABER, M. D. (Stanford University Hospital, San Francisco)—It is the policy of the San Francisco Tuberculosis Association, under whose auspices the present study has been carried out, to concentrate its forces on the problem of tuberculosis in childhood. The reasons for this policy need no explanation to the medical profession. Essential to the prevention and control of the disease in any community is a survey of the local field to estimate how heavily it is infected. To obtain this knowledge we should be able to study a series of representative cross-sections of the community, examining a large number of unselected individuals, sick and well. While these conditions are not ideally attainable, we have in our children's clinics a fair approximation to them, dealing as they do largely with patients coming for minor complaints and increasing numbers with none. The study of the incidence of the tuberculin reaction here presented, which is part of a general survey in conjunction with the University of California children's clinic, therefore supplies us with the basis for an estimate of the magnitude of the tuberculosis problem among the children of San Francisco. Such studies are invaluable and should be carried out in every large city as a sort of stock-taking.

It is worth pointing out to the general practitioner that, although it is a little more difficult, the intracutaneous method of testing is far more reliable than the Pirquet scratch test. As used by the authors of the present paper, the test gives about 80 per cent positives in infected children as against 50 per cent for the scratch method. This has been shown clearly by Happ and Casparis.

CLAIN FANNING GELSTON, M. D. (384 Post Street, San Francisco)—In an analysis of over three thousand Von Pirquet reactions performed at the University of California Hospital outpatient department, the group being unselected children, our percentage of positive reactions was higher in spite of the fact that, unquestionably, the intradermal reaction is more sensitive. On the other hand, for the age groups, the curve in our series followed very closely that of Seitz and Dickey.

The point brought out in our investigation, and of great interest to me, was that in relation to the incidence of measles and whooping cough as a forerunner of tuberculous infection, our figures were practically identical with the two diseases in both the positive and the negative reactors, namely, 42 per cent. This, of course, does not mean that these two diseases do not have a great influence on the course of the disease, should tuberculosis infection be acquired. It also does mean that one should not be unduly alarmed, given a child showing, for instance, tracheo-bronchial adenopathy and such a past history, that the process is tuberculous without other confirmatory evidence.

Statistical papers such as this one, based on carefully controlled and scrupulously honest studies, are of immense value in determining the incidence and in helping us to control the prevalence of many diseases.

WILLIAM C. VOORSANGER, M. D. (490 Post Street, San Francisco)—The excellent work done by Seitz and Dickey at Stanford Clinic and certain conclusions reached, justifies the fostering of this experiment by the San Francisco Tuberculosis Association. We are interested primarily in ascertaining, (1) whether the contact of young children with tuberculous relatives induces active tuberculosis, and (2) whether through routine painstaking examination active tuberculosis can be discovered in early childhood. The authors have stated that in 60 per cent of their

children there was no exposure to tuberculosis, and only 8.5 per cent of their 126 "positive cases" came because of exposure to tuberculosis at home. These figures are at variance with accepted belief and if continued may change our present point of view that contact with infected surroundings is a leading etiological factor in the causation of tuberculosis in young children.

The point which principally impresses me in this paper is that the authors use the cutaneous tuberculin test merely as an indicator, not as a positive diagnostic sign, drawing conclusions only after a complete clinical and x-ray examination. Fishberg does not believe that children between three and five years of age with positive skin reactions are doomed necessarily to active phthisis. The authors themselves have shown that the smallest per cent of positive reaction (6.4 per cent) occurs under age four. At this age, or before, we should like to detect the incidence of tuberculosis, not in later ages after it has become active. The largest percentage of positive reactions in the patients of Seitz and Dickey was between twelve and fourteen years. Were not many of these in patients with healed lesions and if so what percentage? The authors have rightly shown the valuelessness of the once-accepted D'Espine sign, with which view most clinicians agree and stress their x-ray findings. Armand-Delille at the Herold Hospital, Paris, uses the x-ray routinely in infants under one year of age and places great diagnostic importance on his roentgenological findings.

The present authors have made an interesting classification with their three groups of x-ray findings, based upon involvement of lung parenchyma. Perhaps greater study and investigation along this line may help to diagnose tuberculosis in the young infant. We who treat principally adult tuberculosis realize that the disease can only be eradicated by detecting and controlling it in infancy. The work just presented should be continued because it is not only of scientific interest, but of benefit to the community at large.

**AUTHORS (closing)**—As noted by Voorsanger, the largest percentage of positive reactors was in the twelve- to fourteen-year group, and most of these gave evidence of healed lesions. All of the children with active tuberculosis were younger than this.

We wish to thank Doctors Faber, Gelston, and Voorsanger for their interesting discussions.

**Simple Classification of Goiter**—J. Earl Else, Portland, Oregon (Journal A. M. A.), presents a pathologic and a clinical classification of goiter, the latter being an amplification of the former. Else holds that the term goiter should be limited to those pathologic processes that directly result from an iodine deficiency. There are two main divisions in his classification: colloid and hyperplastic. The second group is divided into the cellular and the acinar. The cellular is divided into the nontoxic and the toxic; the latter into adenoma, adenomatosis or diffuse adenomatous and compensatory hyperplasia. Each of these groups is further subdivided into the nontoxic and toxic. The clinical classification is based on the presence or absence of the symptoms and signs of hyperthyroidism. If there is no evidence of hyperthyroidism, the process is spoken of as simple or nontoxic; but if there is evidence of hyperthyroidism, it is then referred to as toxic. The acinar type always begins as simple or nontoxic and then later often becomes toxic. True colloid goiter is never toxic, but sometimes there is hypofunction due to alteration in cell shape lowering its activity in addition to the primary iodine deficiency. This classification meets the requirements in being simple, including all primary pathologic processes, covering all the clinical types, being descriptive of each, and not adding a single new term to an already overcrowded literature.

**Sulpharsphenamin in Treatment of Warts**—In the treatment of plane warts of the face, Richard L. Sutton, Kansas City, Missouri (Journal A. M. A.), secured very satisfactory results from the intramuscular injection of sulpharsphenamin. The average dose has been 0.4 gm., and only sulpharsphenamin has been employed. The drug is dissolved in a minimal amount of sterile water, and injected directly into the gluteal muscles. In each instance only one injection was required.

## PULMONARY NEOPLASMS †

### A DISCUSSION OF THEIR INCREASING PREVALENCE DIAGNOSIS AND TREATMENT

By C. E. ATKINSON \*

**L**UNG TUMORS occur more frequently than commonly supposed. Recent statistics reveal a considerably larger number of primary lung cancers—an increase in part due to greater diagnostic acumen, but in part actual. As a cause, evidence points most strongly to the influenza epidemic.

The symptoms of tumor and tuberculosis are almost identical, but the age periods are usually different. However, carcinoma tends to appear earlier in life than formerly. Yet if symptoms first appear after 40, cancer should be kept in mind. Pain, often prominent, tends to occur early, to persist or recur and to progress. Often worse at night, it may seem deep in the chest. Pain persisting after effusion forms is especially suggestive. Pain may be referred to the epigastrium; or shoulder and arm pains may occur with sympathetic phenomena and simulate a cord or meningeal lesion. Pronounced throat symptoms may occur just as in pulmonary tuberculosis without laryngeal signs. Dyspnea disproportionate to the general condition, cyanosis, and venous obstruction are of particular import. Sanguinous pleural effusion occurs in both tuberculosis and cancer. A fluid which becomes bloody only after repeated tapping, which gives but temporary relief, is said to have special diagnostic value. In tuberculosis it is claimed the fluid is more often bloody on a first tapping and subsequently clear, and tapping usually relieves. Currant-jelly or prune-juice sputum is said to favor cancer. Rarely, tumor particles are expectorated, and certain polymorphous sputum cells are held pathognomonic. A normal pulse with fever is said to suggest cancer. Weight loss and cachexia develop later in lung cancer than in other malignancies.

Many now believe the local irritation from tuberculosis may give rise to cancer; and the two diseases not rarely coexist.

Physical signs are often negative and usually indefinite, which in itself is suspicious. Over the tumor, flatness tends to develop, and if accompanied by weak or absent breath sounds without rales, this is against tuberculosis, but may cause confusion with fluid or abscess. A neoplasm tends to push the heart and trachea to the opposite side, while scar shrinkage from tuberculosis draws these organs toward the affected side.

Special methods include the use of the bronchoscope and endoscope, which in skilled hands may yield valuable data. Roentgen study though ex-

† Abstract of an article read before the Section on Tuberculosis of the Los Angeles County Medical Society, May 25, 1926.

\* C. E. Atkinson (Banning California). M. D. University of California (Los Angeles Department), 1907. Practitioner limited to Tuberculosis since 1912. Graduate study: Internship Los Angeles General Hospital, 1907-8. Instructor in medical clinic, Los Angeles Medical Department University of California, 1908-12. Hospital connections: Member of staff, Pottenger Sanatorium for Tuberculosis, 1913-15; medical director Seymour Sanatorium, 1910-21; consultant Henderson Sanatorium, 1921-26; now medical director Southern Sierras Sanatorium (Banning). Publications: "Lessons on Tuberculosis and Consumption," 1922, and articles in current medical periodicals.



tremely useful is not infallible. Ordinarily a new growth produces a roughly circular shadow, which may originate either in the parenchyma or hilum, may or may not be circumscribed, and may be accompanied by smaller metastatic shadows. Multiple tumors usually cast larger shadows than tuberculosis, and the surrounding lung is clearer. Secondary carcinosis shadows are likely to be most thickly set at the base. The growth may show only as a haziness and x-ray evidence may even be entirely lacking, though it is rare to have negative findings when symptoms are present. If effusion is found, it should be aspirated and x-ray study made at once. A diagnostic pneumothorax may prove helpful. In doubtful cases of mediastinal shadow the esophagus may be filled with barium for screen study. Misleading conditions include intrathoracic thyroid, enlarged thymus, actinomycosis, nocardiosis, hydatid disease, encysted empyema, abscess, cold abscess, unresolved or caseous pneumonia, lung syphilis and aneurism. Benign lung tumors are rare, so the differentiation is mainly between carcinoma, sarcoma, lymphosarcoma, endothelioma, and Hodgkin's disease.

A few cases of successful surgical removal of lung tumors have been reported. Roentgen therapy has prolonged life for years in lymphosarcoma and Hodgkin's disease, even bringing apparent cure, and in cancer has produced a few favorable results. With deep therapy now in wider use, the outlook is brighter. Radium externally and bronchoscopically applied, was successful in one case. Among general remedies, selenium and copper have been used abroad with some success. A promising method is the intravenous use of lead, but this preparation is not yet obtainable for general use. For cancer, colloidal gold, and for sarcoma, Coley's fluid, merit trial, and thyroid therapy and iodides should not be disregarded. Potash, up to 90 to 180 grains a day, is also worthy of use. Many are accepting the view that there is some general predisposing factor, and cancer is rare among peoples who use no meat. A meatless nonstimulating diet in moderate quantity only should be advised, and intestinal stasis prevented.

Four cases, one primary carcinoma, one primary sarcoma with tuberculosis, one unidentified tumor which disappeared under thyroid therapy, and one probable primary carcinoma engrafted on tuberculosis and associated with syphilis, are cited.

The outlook is no longer hopeless, and with concentrated efforts it seems that in future years a not inconsiderable number of these patients will be saved.

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**Enormous Calculus Pyonephrosis**—The case reported by Montague L. Boyd, Atlanta, Ga. (Journal A. M. A.), illustrates how painless an enormous enlargement of the kidney with very large calculi may be and the difficulty encountered at operation in such a condition. In this particular case an intracapsular enucleation of the kidney was done. The entire mass measured about 20 by 20 by 35 cm.; the decapsulated kidney, about 18 by 18 by 30 cm. It was lobulated, fairly firm, and uniformly enlarged. It weighed 196 gm. The stone paste weighed much more than that. Microscopic examination showed a mass of connective tissues with acute inflammatory processes and only an occasional glomerulus. The diagnosis was pyelonephritis, chronic and acute, and renal calculus.

## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

### SUPRARENAL HEMORRHAGE

REPORT OF A CASE IN A NEW-BORN CLINICALLY  
RESEMBLING INTRACRANIAL HEMORRHAGE

By ESTHER BRIDGMAN CLARK \*

(From the Division of Pediatrics, Stanford University  
Medical School, San Francisco, California.)

The occurrence of hemorrhage of the suprarenal gland in the new-born was first described by Mattei<sup>1</sup> in 1863, when he noted it in a statistical report of autopsy findings in fetuses and new-borns. Bilateral hemorrhage is more common than unilateral, but when the latter occurs the right kidney is more often involved than the left. It is more common in girls than boys.

Hamill<sup>2</sup> (1901) gives a very detailed review of the literature and 90 case reports from the literature and his own observation. Corcoran and Straus<sup>3</sup> (1924) also review the literature and note that about 100 cases have been reported. They add a case of their own in which the diagnosis of suprarenal hemorrhage was made in a five-day-old infant. Operation was performed, the hematoma removed and a bleeding point on the suprarenal gland ligated. Complete recovery ensued.

The etiology is obscure and is most likely not the same in all cases. Those hemorrhages occurring in stillborns or very soon after birth are considered by Rabinowitz<sup>4</sup> (1923) as being due to asphyxia. Corcoran and Straus<sup>3</sup> also believe that in new-borns trauma and asphyxia play the most important rôles, the suprarenals being of very friable tissue and rich in blood vessels.

Some cases appear to be associated with sepsis, the blood culture having been found to be positive. Other causes that have been suggested are syphilis, hemophilia, thrombosis of the suprarenal veins, and compression of the vena cava by the liver.

Langlois and Chanin<sup>5</sup> (1893) produced engorgement of the suprarenal in rabbits by injecting *B. pyocyaneus*, Roux and Yersin<sup>6</sup> (1899) got the same result with *B. diphtheriae*.

Many of the cases are associated with purpura, especially in older infants and young children. The possibility of the purpura bearing the same relation to the suprarenal hemorrhage that pigmentation of the skin bears to the diseased suprarenal in Addison's disease has long been considered.

The symptoms are variable, but for the most part resemble those of an internal hemorrhage. There is rapid shallow breathing, air hunger, restlessness, refusal to nurse, vomiting, fever, frequent convulsions, at times an increasing anemia is noticeable. In a few infants in whom the hemorrhage is very extensive the mass has been palpated. The colon may be compressed with symptoms of intestinal obstruction. In male infants swelling of the scrotum has been noted from pressure on the left spermatic vein in hemorrhage of the left suprarenal. In practically all of the cases reported sudden onset in previously normally behaving infants or children is the rule.

#### CASE REPORT

From the service of the Children's Clinic, Lane Hospital. Baby girl S., No. 151119. Born April 28, 1926, at 7:30 p. m. Parents were each 22 years old and healthy. The mother was a primipara and had a normal pregnancy terminating at term in an easy, normal, five-hour

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\* Esther Bridgman Clark (Lane Hospital, San Francisco). M. D. Stanford University, 1925; A. B. Stanford, 1921. Graduate study: Senior Intern in Pediatrics, Lane Hospital, 1925-26. Present hospital connections: Resident in Pediatrics, Lane Hospital. Scientific organizations: Northern California Pediatric Association; San Francisco County Medical Society, C. M. A., A. M. A. Practice limited to Pediatrics.

labor. Her Wassermann was negative. The baby was well developed and weighed 3680 gms. Cry was delayed for 20 minutes, then breathing was irregular and shallow, though the pulse was good. Bleeding time was  $1\frac{1}{2}$  minutes, coagulation time 3 minutes; however, 10 cc. of whole blood was given intramuscularly. After four hours, breathing became normal. April 29 at 9 a. m. temperature was 100.2 R. (had been over lights). Refused to nurse. At 2 p. m., after taking 20 cc. at breast, regurgitated and had a cyanotic attack lasting a few minutes. April 30, at 2 a. m., began having generalized convulsions lasting a minute and occurring every 15 to 30 minutes. At 8 a. m. there was moderate cyanosis, breathing shallow and irregular, frequent convulsive twitchings of arms, hands, and legs. The fontanelle was rounded out but not tense. The possibility of intracranial hemorrhage was thought of and lumbar puncture done. Clear fluid under no increase of pressure was obtained; it showed 140 red blood cells per cu. mm., mostly old. Respirations continued slow, irregular, and shallow. There were frequent severe attacks of cyanosis, slightly relieved by oxygen. By 6 p. m. the baby was constantly limp and the pulse was 70-80 per minute, and irregular. Death occurred at 11:20 p. m. (Age 52 hours.)

*Clinical Diagnosis*—Multiple cortical hemorrhages.

A necropsy was done ten hours after death by Doctor William Ophüls. There was no evidence of subdural or intracranial hemorrhage, the meninges and brain were congested. Icterus neonatorum was present. There was a small amount of sticky, bloody fluid at the base of the right pleural cavity. The right adrenal gland was almost totally destroyed by a large hemorrhage; the hemorrhagic mass measured  $3 \times 2 \times 1$  cm. The right kidney and left adrenal and kidney were normal. There were no other significant findings.

*Anatomical Diagnosis*—Hemorrhage of adrenal, right; icterus neonatorum.

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## GIANT URTICARIA DUE TO DISEASED (PUS) TONSILS

### CASE REPORT

By SAMUEL FLOERSHEIM, M. D., *Los Angeles*

A male patient in a tuberculous sanitarium was referred to me suffering from giant urticaria.

The history elicited the fact that three months previously spiced chopped fish was served with other foods. Most all persons who had partaken of this fish became more or less decidedly ill. The medical director and assistants did not eat any and they were not attacked.

The patient was first referred to a dermatologist, who tried every means known to him to control the attacks. The patient during these three months was also sent to and examined by the nose and throat specialist. The patient came to me with no improvement and with the decision that the tonsils should come out, as they may be a factor in the constancy of the attacks. The patient never before suffered with the attacks of urticaria and he was not seemingly ill with his pulmonary tuberculosis. He was rated as a good case, just past the incipient stage—not apparently quiescent—practically no cough or expectoration. Going over him quite thoroughly, even to x-rays and general laboratory work, nothing of especial note was encountered except some intestinal non-pathological parasites (Brem-Zeiler). He was vigorously

treated for this with no apparent good results. Abstinence from food and with very little water for two days would prevent the occurrence of attacks. These attacks would occur chiefly after midnight and would wane after 6 or 7 a. m. At times the urticarial lesions would persist until noon. Any and every food would cause attacks. He was protein tested for all and every food, dust, hair pollens, etc., some 180 or more in number by both a special physician in protein sensitization and at the Los Angeles General Hospital—all negative. To me the tonsils did not seem seriously diseased, and I believe bacterial protein was also used in the test and found negative. After all the different tests and varied medication, diet, and hygienic measures were advanced and carried out, no progress was made. It was proposed to try a cool climate, and in the event of failure then as last resort to have a complete tonsillectomy performed. The patient left presumably for San Francisco or Portland, but turned up in Denver late in October or November. He was gone over very carefully and thoroughly again and the decision was not to do a tonsillectomy, but to do autohemic therapy. This likewise proved futile. All the while the patient did not lose much weight nor did his pulmonary tuberculosis progress nor did he feel very ill except only at the irregular time of outbreaks of the giant urticaria. After definite autohemic failure, nothing else left to experiment with and with the former suggestions of last resort of tonsillectomy, the patient asked and fairly insisted on trying out the operation.

Letter received from him four weeks after the operation stated: "I feel 90 per cent better and hope the other 10 per cent will follow soon." Four months later another letter received in which the information was advanced that the other 10 per cent had been accomplished. Eight months later I again interviewed the patient and he explicitly stated that not a single attack of urticaria has appeared since the day of the tonsillectomy—eighteen or twenty months—in spite of the fact of his numerous attempts to bring on an attack by eating allspice, onions, horseradish, pickles, fish, condiments, and any and all irritating foods.

## FOREIGN BODIES IN THE ALIMENTARY TRACT

By W. C. SHIPLEY, M. D.

During the past twenty-six years it has fallen to my lot to give advice to many mothers whose children have swallowed small toys and other objects foreign to the digestive system. The list includes marbles, small metal toys, buttons, screws, wire nails, tacks, pins, nickles, dimes, copper cents, small pieces of rags, rubbers, and other objects that have slipped my memory.

As my first experience with this line of work was in a mountain district where there were no hospital facilities or x-ray to aid in the diagnosis, and as something had to be done to appease the anxiety of the parents, especially the mothers, the following line of treatment always served to bring the offending object safely through the alimentary canal in from twenty-four to thirty-six hours without harm to the patients who, in most instances, were children under 6 years of age.

Give the patient all the canned corn or beans that he will eat. This forms an indigestible mass about the object to be removed and at the same time acts as a skid to help it on its way through its tortuous passage. About two hours later a good dose of castor oil is administered, and the mother told to watch every stool that the child passes until the object is found. This line of treatment, while it may seem crude, is simple, safe, and sure.

**Simple Goiter and Its Prevention**—According to David Marine, New York (*Journal A. M. A.*), the factors which cause simple goiter center about the supply of iodine and the needs, normal and abnormal, of the thyroid gland for iodine. Supplying this element in amounts that can be considered as roughly approximating the physiologic needs of the body has resulted in completely controlling the disease both in man and in animals.



## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### THE RELIABLE AND DEPENDABLE REMEDIES IN THE TREATMENT OF THE LATER MANIFESTATIONS OF SYPHILIS AND THE METHOD OF THEIR EMPLOYMENT

**The Editor**—The outstanding message one gets from a careful reading of this valuable discussion of the treatment of the late manifestations of syphilis is, that treatment of the patient rather than the disease should be a prime consideration, even more so if possible than in other diseases.

There are no otherwise healthy patients with tertiary syphilis; the disease in these stages is found only in persons already or coincidentally more or less crippled with the same sort of failings that exist all but universally in nonsyphilitics of comparable ages. To these, of course, must be added the degenerations and other consequences of the long drawn-out battle between parasite and host. These battle scars are not disease, but results, usually irremedial ones.

Syphilographers have emphasized the important fact that, if we could instantly destroy all the parasites in most late syphilitics, we would still have an incurable patient. It is possible, to be sure, to arrest the disease, and it is possible often to help the patient to an improved degree of health, but much of such improvement is brought about by broadening management to include far more than antisiphilitic medication. It is encouraging to see this point emphasized by the discussants.

It is encouraging also to note the plea for essential individualization of syphilitic patients, an individualization arrived at by careful, frequent, complete examinations and the careful adjustment of the drugs and dosages of the powerful, poisonous, parasitocidal remedies to the needs and varied tolerance of the wide varieties of patients.

The wide interest in syphilis is indicated by these discussions. We received more letters about the discussion of the treatment of early syphilis in this department than any other of the subjects dealt with in "Bedside Medicine for Bedside Doctors." Several requests for this present discussion of the treatment of the later manifestations have been received.

**Henry G. Mehrtens \***—Of the later manifestations of syphilis, neurosyphilis occupies an important place. Its treatment includes the same remedies found effective in the earlier lesions. These are used in a slightly different way, because in neurosyphilis the spirochete is much less accessible to spirochetocidal agent. The necessity of protracted treatment frequently necessitates the utilization of each remedy in turn so that the organisms may not acquire a partial tolerance to any one drug.

Intensive intravenous and intramuscular medications produce satisfactory clinical results as well as clearing up of spinal fluid in over 40 per cent of

all patients. Arsphenamine given in weekly doses for twelve weeks seems to me to produce a more satisfactory result than neoarsphenamine, although for office practice simplicity of administration is a strong recommendation for the latter drug. Sulpharsphenamine, because of its slightly increased ability to penetrate the meninges has been recommended as particularly effective in neurosyphilis. It would seem that in addition it has the power to attack organisms which have proved resistant to long-continued arsphenamine injections. Not the least of its virtues is the fact that it can be utilized intramuscularly when veins have been damaged by other treatment.

Mercury, whether used as rub, intravenously or intramuscularly, must always have a place in our scheme of therapy. In neurosyphilis the intramuscular injections, because of their slower absorption, are ordinarily more effective, although rubs, when skillfully and conscientiously given, are as effective as any form of treatment.

Bismuth is an exceedingly popular remedy at the present time; while it is doubtful it will ever replace mercury, still it may prove a worthy companion. Frequently alternating weekly intramuscular injections of bismuth and mercury, six weeks of each, will clear up a fluid resistant to arsphenamine and mercury doses. The iodides can be advantageously administered in moderate doses during rest periods.

Triparsamid, the newest addition to our armamentarium, finds its greatest use in paresis. It has the greatest permeability of all arsenic compounds. Given intravenously in 2 to 3 gram doses each week, for eight injections, then resting three weeks, it frequently gives remarkable improvement in mental symptoms. However, alone it does not readily clear up the spinal fluid, and should be combined with intramuscular injections of mercury or bismuth. Unfortunately the possibility of amblyopia must not be overlooked, even when the eyes have shown no previous involvement. Therefore this drug should be used after the other safer agents have been tried.

Intraspinal therapy is only indicated in patients resistant to the above measures. They should be executed only by one, both familiar with the technique and with access to proper laboratory facilities. Malarial treatment is still in the experimental stage. Apart from the specific remedies, there is a growing feeling that nonspecific reactions brought out by the intramuscular injections of milk, vaccines, etc., tend to stimulate bodily resistance.

Finally, no matter what combination of remedial agents seems best for the individual patient, the building up of resistance is a most important factor in treatment. Unless this is accomplished, no drug therapy will entirely succeed. Along these lines proper rest periods, observation of the urine, the weight, diet, exercise, exposure to sunlight, removal

\* Henry George Mehrtens (Stanford University Hospital, San Francisco). M. D. Stanford. Practice limited to Neuropsychiatry. **Appointments:** Associate Professor of Medicine (Neurology), chief of Neuropsychiatric Clinic. **Publications:** "Therapy in Neurosyphilis, with Particular Reference to Intraspinal Therapy," Archives of Neurology and Psychiatry, January, 1922; "Tryparsamide Penetration into the Central Nervous Tissue with and without Spinal Irritation," Archives of Neurology and Psychiatry, July, 1924.

of focal infection, and even mental hygiene, will all count heavily in the end result.

*The Editor*—It is hoped that other discussants will extend the scope of the discussion to include manifestations other than those of the nervous system. Every bedside doctor encounters and treats patients for the later manifestations of syphilis. What treatment is being used and how is of interest to all doctors.

**John R. Frank \***—I believe that the large clinics and hospitals should use the newer drugs which are yet in the experimental stage, such drugs as triparamid, malarial infections, bismuth. The patient must have strongly impressed on his mind the absolute necessity of a long and more or less unpleasant course of treatment. The probable results of failure to be treated should be pictured, examples of other patients cited, so that he may choose between the lesser of two evils.

To my mind the "reliable and dependable remedies" consist of arsphenamine, neoarsphenamine, the iodides, and mercury. Other remedies are still in the experimental stage and should be used with caution. Tertiary syphilis should be treated thoroughly and radically to the physiological limits of drugs. Arsphenamine may be given in 0.9 gm. doses and 0.9 gm. of neo given every six days, as practically all of the drug is eliminated in four or five days. Potassium or sodium iodide should first be given to the saturation point, i. e., to the appearance of a rash coryza, conjunctivitis, or a headache. It is best to begin with 20-grain doses and increase rapidly to 5-8 grams daily, well diluted. Since the iodides are rapidly absorbed, their intravenous use has no advantages. After saturation is reached, either mercury or salvarsan may be given. I personally use neosalvarsan, since I find it so much easier to prepare and the after effects are lighter than those of salvarsan, and the results over mercury are quicker and more spectacular. After ten doses of neosalvarsan, I follow immediately with a thorough course of mercury. The form of mercury given differs with each case as circumstances demand or permit. The intramuscular method using the salicylate is the surest, but I find that the average patient will not continue the treatment long on account of the pain occasionally encountered. They will not give themselves the rubs, so that the usual method is by mouth, using the protoiodide or mixed treatment. When the patient has good veins and the money to pay for it, the soluble forms of mercury intravenously are more desirable. Locally 1-2000 bichloride solutions are first used, then an ointment of 5 to 10 per cent ammoniated mercury.

In cerebrospinal syphilis after an injection of salvarsan I frequently drain off 10 or 20 cc. spinal fluid. This, theoretically at least, allows the salvarsanized blood serum to enter the cavities of the brain via the chorioid plexus. Lumbar puncture is

especially indicated for syphilitic headache. Intraspinal injection of salvarsanized serum should also be used where facilities permit.

Patients should have Wassermanns at stated intervals and receive treatment for three or four years whether the Wassermann is negative or positive, with rest periods of two to three months. In all antisyphilitic treatment the bowels must be kept well open and the kidneys constantly watched. Sodium thiosulphate should be on hand for use in case of an overdose of mercury or salvarsan.

**E. M. Wilder \***—In treating the later manifestations of syphilis one should realize that such neurosyphilides as, because of their resistance to the ordinary methods of medication, require intraspinal treatment should not be treated by most bedside doctors. Intraspinal medication, the use of triparamid, stovarsol, mercury cyanide intravenously for tabes, malarial and nonspecific protein therapy for paresis, and in general the use of all drugs and procedures the use of which is still in the experimental stage should be left to specialists and used only in hospitals or clinic with methods closely guarded and results properly checked and tabulated. In the treatment of the late secondary and ordinary tertiary lesions which are the proper subject of our discussion the reliable remedies are, as in earlier syphilis, arsphenamine, mercury, iodide, and bismuth, the safety and reliability of the latter being now firmly established. The dosage and mode of administration of these drugs will be altered in the treatment of late as compared with earlier syphilis, but the essential differences to be noted in the treatment of later syphilis exist because the human material, not the drugs, is altered.

In treating early syphilis a complete cure is the end in view. But when confronted by the later manifestations of the disease we cannot set our goal so high, and may consider ourselves fortunate if by our care and treatment we enable the patient to finish out his expectancy of life in happiness and apparent health even though his Wassermann reaction may neither become nor remain negative. In long-standing syphilis a balance has often been reached between the invading organism and the body, and we must be careful not to upset that balance through depressing the constitutional resistance of the patient by overwhelming him with too strenuous medication. A patient with late syphilis is usually a more fragile vessel for the exhibition of drugs than one in the earlier stages, both because he has been longer subject to the ravages of the disease and because he is himself older and more liable to organic deteriorations from the wear of life and from disease other than syphilis. For this reason perhaps more than elsewhere in medicine the physician must remember in treating late syphilis that he is primarily concerned not with extirpating the

\* John R. Frank (1243 Sixteenth Street, San Pedro, California). M. D. Indiana University, 1917; A. B., 1919. Graduate study: U. S. Naval Hospital, Annapolis, Maryland, 1917-18; Boston Psychopathic Hospital, 1920-21; New Jersey State Hospital, 1921-22; Neurological Institute, New York, 1922-23 (ten months). Previous honors: U. S. Navy, 1917-20. Present hospital connections: San Pedro General Hospital. Scientific organizations: Los Angeles Medical Association, California Medical Association, American Medical Association. Practice: General.

\* Edwin M. Wilder (1027 Tenth Street, Sacramento, California)—M. D. University of California, 1900; B. L. University of California, 1894. Graduate study: Intern French Hospital, San Francisco, 1900; intern Napa State Hospital, 1901-02. Practice: Special attention to Urology since 1923. Hospital connections: Secretary staff Sutter Hospital, Sacramento. Previous honors: Local draft board, 1917-18; member Sacramento City Commission, 1912-14; member Sacramento City Council, 1921-23. Scientific organizations: County, state, and A. M. A.; California Northern District Medical Society, San Francisco Academy of Medicine.



germs of the disease, but in restoring to comparative health and maintaining in comfort and safety a relatively fragile and always damaged human organism.

Too often in treating late syphilis the doctor's attention is centered on exterminating the spirochete and keeping the Wassermann reaction negative, and the patient's constitution is not sufficiently considered. This is not right. It is good practice to combat the spirochete, but the patient must not be forgotten. His body should be supported in its combat with the disease and he should be treated, not for syphilis alone, but for the accumulated disabilities of an organism long syphilized and in the last third of life.

The first step in treating late syphilis should be a complete physical examination and a close estimate of the patient's physical condition. Consider particularly the excretory organs and the circulatory system. Impairment of either will necessitate reduced dosage and increased attention to elimination. The mouth and teeth should be kept in good condition and gastrointestinal disturbances corrected. "A clean healthy mouth and a tolerant digestion make the vigorous use of mercury much easier." We must be careful of the heart muscle. Tonic doses of digitalis are valuable even when digitalization is not necessary. The condition of the optic nerve should be determined before beginning the use of any arsenical. The kidneys particularly need watching and when they are damaged, treatment either with mercury, the arsenicals, or bismuth requires much more care and caution than with other patients.

The key to the treatment of late syphilis is moderation. Intensive medication has little place here, and all treatment should be primarily symptomatic and only incidentally directed to the cure of the disease. There is a tendency to give less arsphenamine in late cases than early, but that is a mistake. Late cases should receive as large totals of the arsenicals as the early ones, but in smaller doses stretched over longer periods. It is evident, however, that when arsenicals are used alone in late syphilis, the central nervous system is not protected and the courses of arsenicals should be followed and alternated with courses of mercury and bismuth, as in the earlier treatment of the disease and in giving courses of these drugs in late syphilis the rule above suggested for the arsenicals applies: give smaller doses stretched over longer periods than in earlier syphilis.

Unless an urgent need for controlling symptoms requires that one begin with arsphenamine it is better to begin with small doses of mercury and iodide for a few weeks and then shift to arsphenamine, beginning with a very small dose and going up to a maximum of not to exceed .6 neoarsphenamine (which is the best all-round preparation of the arsenicals for the general practitioner) every five days or a week. Bichloride of mercury, 1 grain a week, is a good preparation and sufficient dosage. Bismuth in the bismudol preparation, not to exceed 3 grains a week, is a good preparation and dosage. Bismuth seems to be of more value in late than in early cases. It apparently controls tabetic pains in some cases and sometimes converts to negative a persistently positive Wassermann.

As to the iodides, of which sodium iodide is the preferable preparation, although they are most necessary in the treatment of late syphilis, it must be remembered that their effect on syphilis is an incidental rather than a fundamental one. They are not spirocheticides, but act by promoting the absorption of fibrous and granulomatous tissue and should always be administered with mercury or bismuth to supply the spirocheticidal effect. Iodide should be given, by the familiar method of gradually increasing dosage and occasional remissions, quite constantly throughout the duration of a late syphilis, with maximum doses not exceeding for ordinary purposes from 2 to 5 grams per day. I do not believe in gigantic doses of iodide except for the virtual emergencies of vascular syphilis and gummata involving important structures where daily doses of from 20 to 30 grams will sometimes work wonders.

In general it is better to underdose than overdose a late syphilis, provided that the treatment in whichever form be systematic and reasonably continuous.

**Guy Manson** \*—Doctor Mehrtens has pointed out that intensive intravenous and intramuscular medications will bring satisfactory results in 40 per cent of patients. This seems to me to be most encouraging. It also shows how important it is to give proved remedies a thorough trial before resorting to any of the newer remedies. Certainly such remedies as triparsamid, malarial infections, intraspinal treatments, should be used only as a last resort, and then preferably by a specialist.

The advisability of giving a few weeks of mercury and iodides before beginning intensive intravenous and intramuscular medication has been mentioned. I believe great stress should be laid on this point, especially if there is the slightest suspicion of cardiac involvement. I have seen one or two patients whom I believe lost their lives from receiving too intensive antisyphilitic treatment right from the start.

It is generally conceded that arsphenamine is more effective than the neoarsphenamine. For this reason I believe every patient with tertiary syphilis should be given the advantage of this slightly more effective treatment. Very convenient, ready prepared solutions of arsphenamine can now be obtained at the druggist's at a very slight increase in cost. The simplicity of administration is, to my mind, no excuse for denying our patients the best treatment at our command.

I am glad to hear Mehrtens say that the intramuscular injections of mercury are more effective. I have always felt that I got better results by this method. It has the added advantage that it keeps one in closer touch with the patient. Few patients will take the time and trouble to use the rubs correctly. I have never felt that I got any results at all with the oral administration of mercury.

Probably the most difficult problem we have to

\* **Guy Manson** (1020 Mattei Building, Fresno, California). M. D. Cooper Medical College, 1910. Graduate study: Lane Hospital, 1910-11; Brady Clinic, Johns Hopkins, 1915; Alexian Brothers' Hospital, Chicago, 1920. Hospital connections: Urologist, Fresno General Hospital. Scientific organizations: Fresno County Medical Society, C. M. A., A. M. A. Present appointments: Urologist, Fresno General Hospital. Practice: General; special attention to Urology since 1915.

deal with in private practice is the so-called Wassermann-fast patient who, in spite of the most intensive treatment, still has a strongly positive Wassermann. It is recommended that we change our treatment often, using first one drug and then another. I have had patients on whom I have tried all of these methods, but my results have not been encouraging. It is most discouraging to both the patient and his physician.

**Thomas J. Clark \***—To treat successfully the later ravages of syphilis is a problem that differs considerably from that of treatment in early phases of the disease. These patients are frequently in the fourth or fifth decade of life or even older, and have to contend with the decline of their general resources of vitality or possibly with some other disease, concurrently active with the syphilis. They may not be aware of being syphilitic, and the physician should use tact in explaining the diagnosis so that their co-operation may be secured for the treatment. The lesions of which they complain will in most instances soon disappear with vigorous medication, but it is important to have the hearty support of the patient for the future control of the disease.

The medical attendant must consider what he will use to bring this particular patient out of his immediate troubles as rapidly as possible, and to view the future for him so that the follow-up treatment may as nearly as possible cure the syphilis. A great many of them can be cured, but this may mean several years of medical supervision.

The lesions at this stage are destructive to whatever tissue they invade, so it is well to cause resolution to occur as rapidly as possible. Local measures may be used to advantage as well as the general constitutional. Hot compressing with boric acid solution to stimulate the blood supply followed with white precipitate ointment 10 per cent, is of value. Where much ulceration is occurring, swabbing with 50 per cent phenol and dusting with calomel powder is good.

It is well to view the constitutional treatment in a systematic plan based on time division, dividing up the first year into periods of active treatment and resting stages. For three months there can be given intravenously four or six doses of arsphenamine or nearsphenamine at weekly intervals with two doses of salicylate of mercury intramuscularly in the interval of the arsenic medication. When the lesions have healed the arsenic can be discontinued and the intramuscular doses of the mercury continued biweekly or triweekly. After three months the patient is given a month's rest entirely from medication, or may take some potassium or sodium iodide or some iron preparation, and should be advised as to the proper hygienic and general care.

For the second period of active medication, which should be for two months, two or three doses of nearsphenamine intravenously at weekly intervals should be given and then the intramuscular doses

of mercury continued triweekly. This finishes six months of the first year of medication.

The patient should by this time be in very fair general condition and show no active syphilitic signs. A rest of two months can be given with iodide by mouth for alternate weekly intervals.

At this time the treatment periods should be of six weeks' duration with two doses of nearsphenamine intravenously and biweekly doses intramuscularly of mercury with two months resting stages with iodide at intervals for a week, or two weeks.

During the second and third years of the medical supervision, intramuscular doses of mercury should be used biweekly for a three weeks' interval, repeated every three or four months. The iodide should also be ordered for ten-day periods once a month. Bismuth salicylate or bismuth oleate may be used intramuscularly in these late cases as well as the early stages. It is an active remedy. It is used in doses repeated every second or third day for a period of five or six weeks. If bismuth is used it may be followed by mercury after a resting stage, to allow its elimination. In the use of any of these metallic substances the potency of the kidney function must not be interfered with, else the patient is liable to nephritis and exfoliative dermatitis.

**M. W. Hollingsworth \***—Late syphilis differs from early syphilis in that the virus is well fixed in the tissues of the host, and so somewhat protected from the parasitidal action of drugs; and in that the host has developed some degree of tolerance from long association with the spirochaete. Instead of focusing our attention on the rapid destruction of spirochaetes as in early syphilis, in late syphilis it is directed toward healing of lesions and improvement of general health, which is best accomplished by efforts to further augment the patient's acquired immunity.

Of "the reliable and dependable remedies" the arsphenamines kill the parasite (when accessible), but contribute nothing to the patient's resistance. Their injudicious use may even deprive him of such resistance, or develop a drug-fast strain of spirochaetes. Mercury has little or no parasitidal action, but increases the resistance of the host against the spirochaete. Bismuth increases resistance and also kills the spirochaetes. Iodides dissolve granulomata, exposing the spirochaetes to the action of other drugs; any other action they may have is debatable. Iodides are best given just before an arsphenamine course or during a rest period if resistance is high.

My results in the treatment of late syphilis have been better when arsphenamine, mercury, and bismuth have been used in rotation but not together in the same course. Possibly this prevents the spirochaete acquiring a tolerance for several drugs at

\* Thomas J. Clark (Oakland Bank Building, Oakland, California). M. D. University of California, 1899. Graduate study: Vanderbilt Clinic, New York; Hospital Saint Louis, Paris; and Charing Cross Hospital, London. Practice limited to Dermatology, Syphilology, and Genito-Urinary Diseases. Hospital connections: Providence Hospital, Oakland; Alameda County Hospital, and Alameda County Health Center.

\* Merrill W. Hollingsworth (First National Bank Building, Santa Ana). M. D. University of California, 1917; B. S. University of California, 1914. Graduate study: Santa Clara County Internship; University of California, 1921. Present hospital connections: Santa Ana Valley Hospital. Scientific organizations: Santa Ana Clinical Society, Orange County Medical Society, C. M. A., A. M. A. Present appointments: Associate Professor Syphilology, College of Medical Evangelists; Captain, M. R. C. Practice limited to Internal Medicine since 1923. Publications: Two only, both laboratory studies: "Phlorizin Glycosuria as a Diagnosis of Pregnancy," and "The Use of the Circular Slide Rule in Computing the Metabolic Rate."



once, for just as its tolerance to one drug is incipient another drug is substituted. Serological relapses have occurred so frequently following rest periods in the first year that I now make the first year's treatment continuous whether early or late. Rest periods should follow a course of insoluble mercury or bismuth injections. All drugs are administered once weekly. Even with this interval mercurial and bismuth stomatitis are not infrequent. Dosages are determined exactly by body weight, this being facilitated by using a tuberculin syringe for insoluble mercury and bismuth injections and employing a 10 per cent suspension for intramuscular injection. Dosages for 150 pounds are: arsphenamine .6 gm. first injection .4 gm. subsequent injections of the course; neoarsphenamine .9 gm. for all injections, bismuth salicylate .136 gm., and mercury salicylate .120 gm. Treatment of late syphilis in particular should be based on an appraisal of the state of immunity of the host and the virulence of the infection; the greater the degree of immunity the less emphasis is placed in the arsphenamines. The following is offered as a typical schedule for an average case: Start with bismuth salicylate 8 injections, then one of the arsphenamines 6 injections, mercury salicylate 10 injections with iodide 20 grains t. i. d. on empty stomach during the last four weeks of the course, an arsphenamine 6 injections, mercury salicylate 10 injections, rest one month. In the second and third years, courses of twelve injections of bismuth and mercury salicylate are alternated, with rest periods interpolated.

Reactions from arsphenamine are minimized by giving it ice-cold. I find that by incorporating benzocain and procain in the mercury and bismuth salicylate mixtures their injection is rendered painless.

**L. I. Oppenheimer \***—In order to use any remedies to the best advantage their mode of action should be understood in detail; therefore, in treatment of the later manifestations of syphilis, action of the arsphenamines, mercury, bismuth, and iodides should be constantly kept in mind.

Arsphenamine compounds act directly on the spirochetes; destroying by a deprivation of oxygen. Mercury and bismuth work indirectly, improve the body cells' resistance by an increase in their oxidative power and antibody production. Iodides have no action on the spirochete, even indirectly, but cause a resolution of the cellular infiltrate produced by spirochetal action, thereby allowing the antibodies and drugs to act upon the treponema.

It is well, also, to have a clear conception of the comparative value of the different compounds of each of these groups.

The spirocheticidal power of arsphenamine as compared to neoarsphenamine is 3 to 2. In this proportion many experienced syphilologists consider arsphenamine more efficacious, but there is no ex-

perimental evidence to support this view. Sulpharsphenamine and triarsphenamine have less spirocheticidal but greater penetrative power. It appears that they are worthy adjuncts but not substitutes for the arsenobenzols.

Of the indirect spirocheticides bismuth has been proven to be 75 per cent more efficient than mercury. Gruhitz states that bismuth salicylate is more favorably absorbed than the metallic suspensions and has an equally great spirocheticidal power.

Of the mercury compounds the soluble preparations and inunctions are the more reliable. In 1919 I had 230 syphilitics under treatment with neoarsphenamine and soluble mercury.

Seventy-eight per cent of 193 of these patients showed negative Wassermanns one year respectively from onset of treatment. All of the seven secondary cases presented negative Wassermanns. One of them had a reinfection. In 1920 the same neoarsphenamine therapy was followed, but mercury salicylate once a week was given instead of the benzoate three times weekly. One of the secondary syphilitics developed generalized, disseminated ulcerating syphiloderms two months after eight weeks of the above treatment; while another had an acute syphilitic leptomeningitis three months following a sixteen-week course. Experimental evidence also proves the inferiority of the insoluble mercury compounds. The work of S. Lumholdt in 1920 indicates that mercury salicylate is not reliable because it is decomposed with difficulty and is rapidly eliminated, while metallic mercury, because of its slow, irregular absorption and feeble therapeutic effects, is not the mercurial of choice. Although these are the most widely used mercury preparations I consider them the least efficacious. I do not use the intravenous mercury because of its rapid elimination.

Contrary to the present accepted conception I believe that the mercury should be given along with the arsenobenzol preparations; for, while the mercury does not synergize the action of the arsphenamine it provides a constant enemy to those spirochetes remaining after the arsenobenzol has delivered its powerful blow, thus tending to eliminate or incapacitate the remaining organisms, both hindering their multiplication and rendering them more susceptible to the next arsphenamine injection.

Experimental work at the Mayo Foundation has proved K. I. to be more efficacious than the Na I compound. I have seen a demonstration of the former preparation's value in the slow absorption of a papillomatous syphilitic growth of the vulva.

After the best agents for use have been determined the régime of their application is an important consideration. In addition to the plans of procedures discussed, I suggest that sulpharsphenamine be added to the armamentarium as an integral part of therapy for tertiary syphilis.

In regard to treatment as applied to tertiary involvement of the urogenital system, gratifying results are obtained in gummas of the testicle, gummas of the bladder and in early neurogenetic involvement of the bladder. In the early spastic stage of the latter condition the residual and symptoms can be relieved within two months, while with more advanced cases, where nerve tissue has been de-

\* **L. I. Oppenheimer** (Wakefield Building, Oakland). **M. D.** Rush Medical College, 1918; **A. B.** Stanford, 1914. **Graduate study:** Cincinnati General Hospital, 1918; Alexian Brothers' Hospital, 1923. **Previous honors:** Assistant surgeon Reserve U. S. P. H. Service, 1919-23. **Present hospital connections:** Providence Hospital, Oakland; Urology Clinic, Oakland Health Center. **Scientific organizations:** Alameda County Medical Society; C. M. A., A. M. A. **Practice** limited to Urology since 1919.

stroyed, specific treatment to check and urologic, medical and hygienic supervision, are the proper procedures.

In cardiovascular syphilis extreme care in administration of the arsphenamine compounds should be observed. I had a death following the administration of 0.6 gm. neoarsphenamine. Disseminated visceral syphilis is another type which requires careful treatment. Here, also, the less powerful drugs may be indicated.

With chronically damaged kidneys an ordinary dose of mercury may produce an acute nephritis.

**H. P. Jacobson\***—The usual run of patients that present themselves for treatment of late syphilitic manifestations may be roughly divided into two distinct types or groups—the undertreated and the overtreated. In the first category may be included those who either through negligence or ignorance on their own part or through a mistaken diagnosis on the part of a physician have permitted the disease process unhindered progress with little, indifferent, or no treatment at all. In addition to these may also be included a fairly large number of victims whose primary and secondary stages of the disease are characterized by a lack of significant clinical manifestations and have therefore received little or no treatment until the later stages of the disease.

Taken as a unit this group of patients presenting late involvement, provided such involvement is not too extensive and all inclusive, responds fairly well to a systematic and persistent course of treatment.

As a starting point in such treatment I commence with a complete physical, neurological and serological (including complete spinal fluid) examination both for the purpose of a thorough evaluation of the extent of syphilitic involvement and as a guide for treatment. Having ascertained the full status of the patient I then proceed to select therapeutic agents and methods of administering them to suit the individual patient's needs. Of course, the arsphenamines and their derivatives constitute the mainstays. Next in potency and specificity are the salts of bismuth. These two drugs constitute a specific armamentarium in the fight against syphilis. I employ these drugs alternately and usually interspersed with some form of nonspecific protein therapy, such as milk injections. Spinal drainage, through its effect on the permeability of the choroidal plexus is, in my opinion, of some value in patients with cerebrospinal syphilis. Mercury I do not employ at all. Iodides are unquestionably valuable both to help in the resorption of the products of specific inflammation and to stimulate the chief detoxicating

organ in the economy, the thyroid gland. Intra-spinal medication and malarial inoculation should be resorted to only in selected patients and after a sufficient trial of the less severe methods of treatment have failed to achieve desired results.

The second group of patients comprises those who, in spite of early, persistent and intensive treatment, still develop manifestations of the later stages of the disease. Some of these sufferers give a history of having gone through the gamut of all types and manner of treatment without any appreciable change clinically or serologically. They constitute a serious problem because there is an apparent total lack of natural or acquired immunity to the spirochaeta pallida and its toxins, and the burden therefore rests entirely in our ability to combat the disease by artificial and external means. In addition to this lack of immunity on the part of the victim we are at a further disadvantage by the fact that the virus has so perfectly adapted itself to its environment that it has become a biochemical part of the tissues in which it resides and thereby escapes the lethal effects of the specifics which we usually employ. The treatment therefore resolves itself into an attempt at the establishment or re-establishment of tissue immunity plus a dislocation or dissociation of the spirochaetes from their places of rest and refuge. This, of course, is best accomplished by malarial inoculations, which consist of the administration of 5 to 10 cc. of tertian malarial blood intravenously, subcutaneously or intramuscularly. This is then followed, after sufficient and adequate number of chills, etc., by a fairly intensive course of specific medication in the usual fashion. Needless to say, that in all events and at all times, serological examination, of both blood and spinal fluid, must be performed regularly to guide us in our treatment.

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**Friends of Smallpox**—Antivaccinationists or, as they should be more appropriately termed, the friends of smallpox, are as active in England as they are in California. Leonard Rogers, known everywhere for his splendid work in tropical medicine in India, now retired and living in Hampstead, has this to say in the London "Morning Post": "Smallpox in a badly vaccinated population, such as that of Great Britain today, is mainly a disease of childhood, and I do not envy the feelings of those politicians and others who are responsible for the present position when the tragedy of the corner of the Gloucester cemetery filled with the innocent child victims of the antivaccinationist craze is repeated in others of our cities. In my opinion anyone who aids and abets subjecting helpless children to this terrible and wholly unnecessary risk must be held responsible for the sufferings and loss of life which are inevitable sooner or later, under present conditions, in this, the country of the immortal Jenner."

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The birth rate among British teachers averages only 95 children for each 1000, according to public health statistics for 1925 just published. The medical profession is only a little better off, producing 103 babies for every 1000 physicians, while the rate for ministers of 105 per 1000 contrasts unfavorably with that of 231 births for every 1000 laborers. The birth rate per marriage among upper working classes has dropped from four to two and a half children within a generation, while that of casual laborers and feeble-minded is seven.—Bulletin of the Wayne Co. Med. Soc.

"Many of us are dying," says Sir Thomas Horder, "of too much care to live." This is a wise word and, being that of a celebrated physician, it should command the attention even of hypochondriacs.

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\* Harry P. Jacobson (1016 South Alvarado Street, Los Angeles). M. D. College of Physicians and Surgeons, U. S. C., 1916. Graduate study: Internship, San Francisco County Hospital, 1916; Columbia University, three and one-half months, 1925; Vienna, three months, 1925; Dermatological Clinics, London and Paris, 1925. Previous honors: Chairman Section of Dermatology and Syphilology, Los Angeles County Medical Society, 1926. Hospital connections: Attending Dermatologist, Los Angeles General Hospital. Scientific organizations: Los Angeles County Medical Society, C. M. A., A. M. A. Practice limited to Dermatology and Syphilology. Publications: "A Case of Tetanus Successfully Treated by Antitoxin," California and West. Med.; "Purpura Hemorrhagica Caused by the Streptococcus Hemolyticus," Urol. and Cutan. Rev.; "The Treatment of Herpes Zoster," California and West. Med.; "The Biological Features of Syphilis," M. J. and Record.



## EDITORIALS

### SHALL WE GOVERNMENTALIZE MEDICINE AS WE HAVE EDUCATION?

Many roads lead to state medicine. Some are well sign-posted highways; others are devious and as free from signs as the game stalker's trail.

Government health insurance is one of the highways which usually begins as limited service for limited groups and expands until it becomes universal. This form of socialism, which not only breaks through the sacred boundaries of the family circle and stalks to the bedside of the sick or "pre-sick" but invades the personal liberty guaranteed to free citizens, is already old enough in several countries to make its effects observable.

The extensive world-wide revival of socialism during the last few years includes that form of it long known as state medicine, and it therefore behooves those intelligently interested in the health and welfare of people to lay a barrage along this highway and strengthen the guards along the more devious trails leading to the same goal.

The open offensive for state medicine has not been renewed in the United States since its overwhelming defeat by the voters of California some years ago, in which even physicians—honest, able ones—were active on both sides of the question.

One of our able physicians who favored California compulsory health insurance initiative defeated by the voters, after more than a year's observation abroad writes us in a recent letter:

"I intended when I came to England making a real study of social and health insurance, but I have not more than scratched the surface. Of course, I don't think they have health insurance at all. What it amounts to is merely a means of making medical relief available to a lot of people who would neglect themselves or else overcrowd the outpatient clinics. Curiously the doctors are more satisfied than those who are 'insured,' for those who have good-sized panels—2000 is the maximum—get a steady certain income and carry on their other practice as well. They are planning now at the Ministry of Health to incorporate preventive medicine with regular recurring examination of the premium payers at biennial times, hoping to catch the early causes of rheumatism, arthritis, heart disease, and tuberculosis which contribute here overwhelmingly to morbidity. The peculiarity that the English workers had, years before the coming of health insurance contributions, well-organized contributory relief societies known as 'friendly societies,' made the administration of the insurance act easy. Most of the actual administration of such benefits and determination of the individual's needs are under the control of such societies. *Nevertheless, the system is rapidly moving on toward state medicine.* In fact in every way England is more of a socialistic state than the most enthusiastic socialist of a few years back could have expected to find anywhere at any time, and as a result the country is in a state of dry rot."

"Dry rot" of a progressive service; dissatisfaction among those served; intellectual stasis and a pittance in compensation for those who serve; inculcation of the spirit of dependence where thrift should be a watchword, and making a political plaything of the most personal and precious of human assets—health—is the inevitable consequence of any form of state medicine, by any name.

While the frank state medicine movement is for the moment quiescent in our country, the promoters of devious trails to the same end are exceedingly active and numerous; many of them financed, their propaganda often published at public expense and more often as "news."

Different nonmedical groups are working for the control of medicine through control of hospitals, laboratories, clinics, organizations of technical assistants to physicians and other agencies essential to the complex well-rendered service to health.

Some of our universities are teaching, practicing and otherwise fostering a spirit among students that health and illness are state functions which ought to be as "free" and as official as education and served by the same or similar machinery. Some medical schools foster this spirit with both free and near-free clinics for rich and poor. Some organizations of educated groups of physicians themselves contribute to the movement; and individual doctors, on the theory that certain contact will increase their clients, or that they may aid worthy causes by serving the sick in public places managed by others instead of in their own offices, thereby help materially the arrival of the day when the doctor will be but another hired man.

Being the hired man is a perfectly honorable occupation, and many and rapidly increasing numbers of physicians are so engaged. This in itself is not the danger to the cause of medical and health progress, but it is one of the trails that astute promoters hope to see converted into a highway that will make of medicine as complete a government function as education now is. This at first, of course, to be a voluntary matter so far as the citizen is concerned, but later to be as compulsory as attendance of children now is at government schools.

In any event we are moving along that road, and so certain are some that the goal is in sight that they are attempting legislation calculated to make health and medicine subsidiary to education, instead of an independent government unit when the new highway of universal compulsory government medicine reaches Washington.

We have a feeling that somewhere along this route an impossible obstacle will be encountered and that medical and health service will continue to be for a long time a personal matter between those who serve and those who need service, with the proviso that the state will increase the volume and quality of health service for the insolvent as the paramount duty it is.

## EFFECTS OF OVARIAN AND PLACENTAL LIPOIDS ON UTERINE MUSCLE AND AUTONOMIC NERVES

It has long been suspected that the therapeutic virtues of sex organ products are not limited to effects on the strictly glandular portions of the sex organs, or to the mediation of changes through them. The administration of the dried, powdered products and extracts from them is reported clinically to increase the sense of well-being, the mental stability, the appetite, muscular power, and to improve the circulation, and the autonomic nerve balance. All the symptoms of menopause may be inhibited and a sort of rejuvenation occur at least temporarily. The benefits derived may be only the consequence or accompaniment of improved sexual vigor which appears also to be increased, and again a general improvement may occur independently of any demonstrable changes in sex function.

The responses are capricious and sufficiently irregular and inconstant to have caused as much condemnation as approval of the products. The irregular and inconstant effects may be due to weak, improperly prepared or fraudulent products, and there is as yet no reliable standard by which to judge the general effects. Satisfactory analysis in man is difficult, if not impossible, and unfortunately the clinical reports that exist are almost devoid of controls with other tissue products and the results rendered useless. Here, as so often in other problems, there is no satisfactory substitute for animal experiment.

Recently, Miura of the Pharmacological Institute in Freiburg has made a successful investigation, and demonstrated the efficacy of ovarian and placental extracts in rabbits along promising lines. The products used consisted of the lipoidal constituents in these organs, cholesterol probably being strongly represented. Miura injected daily doses of from 0.2 to 0.3 gm. (total 1.1 to 2.2 gm.) of the crude oily products hypodermically during periods of from seven to fourteen days in young virgin rabbits of about 500 gms. body weight. At the end of this time the uterus was markedly hypertrophied, appearing several times larger than the normal control organ. This was confirmative of the older results of Herrmann. Miura states nothing regarding the size of other organs. More important than the hypertrophy, however, was the altered functional activity of muscle and autonomic nerves in the uterus.

This altered functional state of the nerves and muscle was demonstrated pharmacologically by Miura. That is, he showed that the responses of the uterine horns to the classical autonomic drugs after injection of the ovarian or placental lipoids were increased. He first removed one uterine horn by laparotomy and used strips of it for the determination of the control responses to the drugs. After recovery of the rabbits, and treatment with the lipid products, he removed the remaining horn, now hypertrophied, and determined its response to the same drugs in the same concentrations under identical conditions. The results were unequivocal and uniformly showed very marked increases in the

responses to pituitary extract, epinephrine, nicotine, pilocarpine, atropine, and barium. Increases up to seven times the control responses in tonus and amplitude of the contractions were obtained. In other words, Miura demonstrated with these tests a marked hyperexcitability of the smooth muscle and autonomic nerves (both the sympathetic and the parasympathetic) in the uterus. Other organs and functions were not studied, and this would be very desirable before generalizations on the possible effects on autonomic imbalance in general are permissible. Other species were not adequately tried by Miura. The cats that were used gave results which could not be used. Although the results obtained are not transferable directly to man, yet they point the way to promising studies of the vexed problem of sex gland products. As far as they go, they sustain remarkably well the suspicion that sex gland products exert some of their effects by changes in other functions besides the sex function itself. The results suggest indeed a basis for the therapeutic benefits of such products, namely, a corrective influence on autonomic nerve function.

It would be premature to assign the rôle of specificity to the ovarian and placental lipoids used in Miura's work. Controls with muscle and other organ extracts are desirable. In fact, the effects of the various lipoids themselves should be determined, especially of cholesterol, that ubiquitous substance already under suspicion in many physiological functions and pathological alterations.

Miura: Arch. exp. Path. Pharm., 1926, 114:348. "Der Einfluss der Plazenta—und Ovariumlipoide auf die Giftempfindlichkeit des Uterus."  
Herrmann: Monatsschr. f. Geburts. u. Gynäkol., 1925, 41:1. "Ueber eine Wirksame Substanz im Eierstocke und in der Placenta."

## SUPREME COURT UPHOLDS AMERICAN DRUGS

A decision of the highest importance to every physician, pharmacist, drug manufacturer and, in fact, every user of drugs in the United States was rendered by the Supreme Court of the United States on October 11, 1926, when this highest tribunal of the nation declared that the Chemical Foundation has been acting legally and properly in the purchase of the foreign drug and chemical patents during the war, and licensing American manufacturers to produce these essential substances in this country.

The sale of the German patents to the Chemical Foundation took place during President Wilson's administration and had, without doubt, a distinct influence upon the outcome of the war, because this transfer permitted American concerns to begin at once the production of various drugs and chemicals which had theretofore been made only in Germany, and whose importation ceased with our entry into the war.

President Harding, apparently laboring under some misapprehension as to the purposes and functions of the Chemical Foundation, directed that suit be brought by the Government to set aside the sale of these patents to the foundation.

The case was first tried in the Federal District



Court of Wilmington, Delaware, and resulted, after weeks of evidence taking, in a finding against the Government on all points.

The case was appealed to the Circuit Court, which upheld the decision of the District Court in every particular.

A final appeal carried the question to the Supreme Court of the United States, where evidence was heard more than a year ago. The long delay in rendering a decision has afforded time for mature consideration. The court has decided unanimously that the sale to the Chemical Foundation was valid and legal and that the foundation has made no improper use of the powers which it thus acquired.

This decision is a momentous one for everyone who has anything to do with drugs and chemicals in any way whatever.

To the physician it means that he will have a steady and regular supply of reliable drugs of American manufacturers which can never again be upset or cut off by the vicissitudes of war. The same considerations apply to the pharmacists. Among the vitally, necessary drugs affected may be mentioned the arspenamines, cinchophen, barbital, the flavines, procaine, and a host of others.

To the drug manufacturer who has invested thousands of dollars in apparatus for the manufacture of drugs and chemicals under the foundation's licenses, it means relief from a certain degree of anxiety (though the outcome of the case could scarcely have been in doubt) and a tremendous inspiration to further investigations looking to the production of more and better drugs and chemicals for America.

To the nation at large it means that reliable medicines will continue to be sold at reasonable prices; and, more or less indirectly, that the dye industry of America which is now in a flourishing condition (thanks to the Chemical Foundation) will be available for government uses should we become involved in another war.

Nor are medicine and pharmacy the only lines of endeavor affected by this momentous decision. The steel and packing industry and many others will be vastly benefited by the freedom of chemical investigation and activity which is now assured them.

#### "AN INDICTMENT OF THE MEDICAL PROFESSION"

Under the above caption, an editorial in the November issue of *Sunset Magazine* accepts the propaganda of the Children's Bureau apparently as facts and from that insecure basis attacks the medical profession more vigorously and with less of the finesse employed by their "authorities."

The editorial opens with: "If the allegations of the Children's Bureau, U. S. Department of Labor, are true, the American medical profession needs a housecleaning. According to Dr. Robert M. Woodbury (not listed in A. M. A. Directory of Physicians) of the Bureau, the mortality rate of American women as a result of childbirth is among the highest in the civilized world."

After quoting some of the "statistics" by this lay federal bureau—statistics that in effect have been challenged by such eminent authority as the late John Howland of Johns Hopkins in testimony be-

fore a committee of congress and which avoid the cautions of the Census Bureau in the interpretation of "statistics"—the editorial concludes: "If 1000 American mothers must die every year through the carelessness of those attending them, it is time that the leaders of the American medical profession took steps to end the slaughter of the nation's most valuable members."

Even if the worst that the Children's Bureau claims is true, what justification have they for implying the responsibility of physicians and what justification has the *Sunset Magazine* for employing these alleged facts as an editorial "indictment of the medical profession" as being responsible for the tragedy?

Whatever the purpose of the "indictment," one consequence is injury to a great humanitarian profession by jeopardizing public confidence in its members. One may see political advantage in such efforts by the Children's Bureau, which is now fighting for its continuation by Congress—an effort being opposed by physicians and others who are opposed to paternalism in government. But it is more difficult to understand why a dignified California magazine would go the lay Children's Bureau one better by making their implication the basis of an editorial "indictment of the medical profession."

There are some thousands of persons authorized by law to assist mothers at childbirth without sufficient medical education to secure a license as physicians, in California alone. Do the Children's Bureau and *Sunset Magazine* charge the medical profession with responsibility for these stupid laws?

It is claimed that "40 per cent of the deaths during confinement were the result of puerperal septicemia due to infection resulting from lack of surgical cleanliness." This is one of those half-truths that by a little manipulation are converted into a drastic criticism of physicians, particularly when it is boldly asserted that "almost 100 per cent of such septicemias are preventable," thus implying that it is the fault of physicians that they are not prevented.

If the channel through which the baby must travel to be born were always sterile; the outlet into the world were less closely associated with a constantly infected field; the urinary canal were always surgically clean; the glands that empty around the vaginal area were always healthy; were it always possible to deliver the baby without injury to the soft parts; and were all babies delivered by licensed doctors of medicine, puerperal infection would be theoretically 100 per cent preventable and practically more nearly so than it is. But obstetricians know that these favorable conditions obtain in far from 100 per cent of mothers. They know they are always working dangerously near a highly and unavoidably infected field and, more often than it is wise to explain publicly, in a field already infected by methods that need not be mentioned here, but for which the physician is not responsible and which he cannot always counteract.

However, eliminating all the uncontrollable factors, we admit that infection which ought to have been prevented does occur with greater frequency than it should in maternity, as in all other forms of surgical contact. The reduction of such infections has been a major effort of physicians since their cause

was made clear by the work of the immortal Oliver Wendell Holmes.

Too many infants die also, but not as many of these deaths are blamable on physicians as our tax-supported information bureau implies and some editors, relying on their "statistics," assert. Thousands of infants never had a chance to live from the time of the fusion of the elements that produced them. They die by the thousands while still in their mother's womb, some from faulty manufacture and some from faulty environment. Others come into the world so badly crippled that they die during early infancy, again from uncontrollable causes, as well as preventable ones.

It is the duty of physicians and all citizens to reduce as rapidly as possible by intelligent action the hazards incident to reproduction. This is best done by competent personal service, but the utilization of the alleged shortcomings of physicians as a reason for ever increasing control of this important and difficult branch of the practice of medicine by inadequately educated political appointees of a paternalistic government, with inadequately trained agents and advice by mail reaching even the most remote hamlets, obviously is not the road to travel. It is not even a good or safe "temporary route."

**Cautery Treatment of Chronic Endocervicitis**—That chronic endocervicitis is always due to the presence of bacteria even though trauma, whether chemical or mechanical, may have acted as a predisposing cause, is the view of Carl Henry Davis, Milwaukee (Journal A. M. A.). The treatment used in his office is briefly as follows: After a suitable bivalve speculum has been inserted the mucus discharge is thoroughly removed with cotton balls and applicators. A suitable light weight cautery tip, preferably from one-half to three-fourths inches (13 to 19 cm.) long, is placed firmly against the tissue to be destroyed and the current turned on by pressing the button on the cautery handle. As a sufficient depth is reached the tip is gradually moved so as to make a line through the diseased tissue. In many cases it is necessary to cauterize only the glands near the external os and the eroded area; in others, the disease extends to the internal os. If at any time the patient complains of discomfort the contact button is released and the current not applied again until she is comfortable. This process is continued until a sufficient number of cautery lines have been made. Nabothian cysts are destroyed in a similar manner after they have been punctured with the heated tip. An effort is made to reach the depth of the glands so as to destroy a part of the diseased tissue and all the bacteria. The lines are at least three-sixteenths inch apart, so that only a part of the cervical glands are destroyed. This permits regeneration of fairly normal glands. If the patient is very nervous or conscious of considerable pain, nitrous oxide-oxygen analgesia or anesthesia is administered in the office. Only a few patients are now being sent into the hospital for cautery treatment. In many ways the analgesia is more satisfactory than complete anesthesia for the office patient. She can administer it herself according to the technic formerly described for self-administration during normal labor. Since making his first report in December, 1924, Davis has treated an additional 180 patients, making a total of 317. Following a cautery treatment there is a marked increase in the discharge for about two weeks, and the patient is warned to wear a napkin. She is told that the next period may be more profuse than normal. A few patients have had excessive bleeding and have required a pack for a few hours. The patient is instructed to keep clean by frequent washing of the external genitalia. Douches are of questionable value, and as a rule women are warned against their use. The author found it advisable to clean out the vagina and cervix every week or ten days and to paint the cauterized area with mercurochrome-220

soluble or compound tincture of benzoin until healing is complete. A second cautery treatment is rarely indicated under four weeks, and very few require any more. The cautery should never be used during the acute stage of a cervical infection. Patients with retroflexion should not be cauterized until the uterus has been replaced and a proper pessary inserted. Subacute salpingitis contraindicates the cautery. Sex trauma should be avoided for at least two weeks after the treatment, and in extensive cases longer. The cervix should never be cauterized during an operation in which the uterosacral ligaments are to be shortened. Syphilis of the cervix contraindicates the cautery. Puerperal patients that show any sign of cervical disease on the examination five or six weeks after delivery return in two or three weeks for another inspection and cautery treatment if it seems indicated. This prophylactic measure may prevent more serious disease of the cervix in the future and is recommended.

**Refractive Changes**—E. C. Ellett, Memphis, Tennessee (Journal A. M. A.), states that the conditions that may bring about a change in the refraction of an eye arrange themselves quite definitely in one of several groups. (a) Alterations in the diameter of the eyeball, especially the anteroposterior diameter, the so-called axial changes, which have the effect of altering the focus of the dioptric system in its relation to the position of the retina, and changing the amount of hyperopia or myopia. (b) Changes in the curvature of the surface of the refractive media, especially the anterior surface of the cornea, and probably the anterior surface of the crystalline lens, producing changes in the astigmatism. (c) Changes in the density (index of refraction) of the refractive media, especially the aqueous humor and crystalline lens. These changes occur under a great variety of circumstances as the result of disease, local or general, and possibly from the absorption of certain drugs or other substances by the media. (d) Changes in the refraction which may occur as the result of muscular action, the commonest example of which is the increased refraction under the influence of accommodation. This change may be voluntary or involuntary, and the latter is often of reflex origin. (e) Cases which are not included in the foregoing groups or which represent a combined type. The method of estimating the refraction in the cases reported has usually been by the use of an efficient cycloplegic, atropine, scopolamine, or homatropine, unless the age of the patient made it appear that the accommodation was no longer to be taken into account. In some instances, for various reasons, a cycloplegic was not employed, but in such cases the circumstances did not appear to demand it.

**A cultist, or a sectarian in healing**, is one who, without regard to the established facts of science, departs on some single dogma, some single belief as to the causation and healing of disease, and promotes that belief with all of the enthusiasm of a divinely inspired fanatic, probably for monetary gain. Contrast with that the scientific physician who has had an education second to none: high school education, university education, four years of medical education and hospital internship, possibly adding two or three years of postgraduate study and fellowship study in an attempt to acquire a knowledge of modern medicine. For modern medicine today is a science based on all of the fundamental sciences, embracing everything that can be taken from chemistry, from physics, from biology, from zoology, from psychology, from sociology, from every one of these deep and abstract studies that have been torn by man from the mysterious and brought into the open. Everything from all of these sciences that can be applied in any way to the diagnosis or healing of human disease must be a part of the armamentarium of the modern physician.—Morris Fishbein, Minnesota Med.

**Rapid, Reliable Clinical Method for Estimating Acidosis**—Lorena M. Breed, Pasadena, California (Journal A. M. A.), has devised a modification of Sellards' method for estimating the carbonate content of the blood. The method has proved simple, yet reliable and accurate. The technique is given, as well as a table of values for comparing carbonate content with percentage by volume of carbon dioxide.



## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

The Bulletin of the Association of American Medical Colleges promises to serve a very useful purpose in the improvement of medical education and practice.

Volume 1, No. 2 (October), contains an article by Emile Holman describing the extensive changes in the arrangement of the curriculum recently inaugurated at Stanford. Ernest C. Dickson discusses the organization and plans for development of the new Department of Public Health, including tropical medicine, recently inaugurated in the same school.

These brief discussions, together with recently published papers by A. C. Reed, head of the tropical medicine work in Stanford; the contributions by William J. Kerr, head of the medical department, University of California; and the promising experiment in partial self-support of medical students being fostered by Percy T. Magan, dean, College of Medical Evangelists, Los Angeles, are indicative of important trends in medical education, with our good medical schools where they belong, in the vanguard of progress.

Many physicians with experience in tropical medicine will continue to wonder at the reasoning which makes this great branch of clinical medicine a subsidiary of a public health department.

Obviously there is precisely the danger in this action that there would be in making all branches of clinical medicine subordinate to a public health department.

An indication of the value and importance of recent studies in tropical physiology that make up Volume 6 (1926), University of California Publications in Physiology (University of California Press) is visualized from this quotation from the introduction by E. S. Sundstroem, from the Australian Institute of Tropical Medicine and the Division of Biochemistry, University of California.

"Irrespective of the possibly ephemeral interpretation to be given to the accumulated data, the writer ventures to say that some of these data by themselves, collected as they were with all possible care, bear evidence that the climatic factor must be reckoned with in the determination of the welfare of the white race in the tropics. The writer disagrees in this respect with opinions held in some quarters that the hot climate itself is a negligible factor and that diseases of exogenous origin or faulty diet are the only obstacles to tropical settlement by the white man. On the other hand, one is led to believe that the pessimistic views expressed by others with regard to these problems are grossly exaggerated. It is possible that the peculiar environmental conditions in the tropics far from being, in the physiological reactions they produce, a check to white migration, may in themselves even carry factors conducive to racial betterment. It will be recognized, however, that before these factors will become effective a number of apparently less desirable, concomitant environmental reactions, notably those seen during the initial stages of acclimatization, will need to be attended to. Exactly of what nature these reactions are and how amenable they are to neutralization offers, I believe, one of the opportunities of physiological science, notably the biochemical branch thereof, to contribute to human welfare."

We are beginning to find out that the question of adaptation of the white races to tropical environment is far more complex than is generally understood.

Many physicians of extensive tropical experience have cautioned against drawing conclusions too broadly from the brilliant results obtained by intelligent control of infections.

Studies like the one under review but confirm the opinion of experienced practicing physicians that, if we could eliminate overnight all infectious agents from the tropics,

the problem of the possible adaptation of the white races to tropical conditions would still be an unsolved one.

The alleged drastic attack on American surgeons by a Dr. M. Porzio, "eminent surgeon" of Rome, for following methods that "killed a well-known film star," and for the claim that "the percentage of deaths from appendicitis in the United States is the highest in the world," will undoubtedly receive the evaluation it deserves by physicians. The trouble is that this "eminent surgeon" broadcast his opinion through the public press of the world.

Criticizing doctors and their methods is becoming a favorite indoor sport for a lot of people, including some of our government publications paid for out of taxes.

Physicians will watch with a great deal of interest the public reception of that amazing book, "The Doctor Looks at Love and Life" by Doctor Joseph Collins (Doran).

From the point of view of the educated physician the book is an excellent portrayal of generally accepted facts by one well versed in his subject and one who is among the most appealing of modern writers.

If this book were issued by a medical book publishing house and released through usual channels to doctors, it would be accepted as a worthy discussion of important subjects; but what the general public may think of it is problematical. That the gifted author anticipates criticism, controversy and even vilification by some is made perfectly clear in his introductory chapter. But as he says, the public has been clamoring for facts about "love and life" and Collins has supplied as many of them as even the boldest writer dare write and the publisher publish.

Whatever the final verdict, everyone must admit that the sorrowful story is told with a skill and cultural taste rarely equaled.

Every physician will find food for serious thought in "Life Insurance Medicine" issued by the New England Mutual Life Insurance Company.

In his letter transmitting complimentary copies of the book to certain publications and physicians, Dr. Edwin W. Dwight, medical director of his company, says:

"The line separating clinical and life insurance medicine has always been and remains a visionary one. Clinicians treat individuals and insurance companies deal with homogeneous groups of a thousand individuals so that the point of view must always be different, but valuable contributions to medical knowledge may be expected from both sides of the line, their reciprocal value depending on their translatability.

"With the desire to make a contribution to clinical medicine the medical department of the New England Mutual Life Insurance Company has just published a volume consisting of a collection of papers on certain phases of insurance medicine written by members of the Home Office staff.

"This company is demonstrating its belief in the value of medical examination for insurance as opposed to the so-called nonmedical selection and feels confident that as we can enlist the interest of clinicians of high standing in our problems mutual advantage will result."

In the opening chapter of the book, Doctor Dwight has this and much more to say of statistics:

"The value of statistics depends upon three factors: their source, their accuracy, and the honesty and intelligence of their interpretation. If we do not know their source, or the accuracy and honesty of their development is not above question, statistics are of no value and

they are always dangerous in the hands of the special pleader. . . .

"Statistics from many sources demonstrate that on the whole the work of the medical profession during this past twenty-five years has been effective, that in the saving of life the increasing of efficiency and the diminishing of suffering much has been accomplished. However, from the statements which have been made it would appear that more has been done than is really the fact. We frequently hear that this man or that man has said in somewhat indefinite terms that 'more has been accomplished in twenty years than in the past twenty centuries'; or that 'the expectation of life in the average individual in our country has been increased by fifteen years.' Such casual statements are untrue, and give us a false sense of security and a false idea of the value of the work which is being done."

The eight chapters of the book are largely devoted to a plea for greater intelligence and less emotionalism and propaganda in establishing our medical facts, and particularly in their interpretation.

Beginning with the January, 1927, issue "The Radiological Review" will be published monthly instead of bi-monthly, and it will increase its number of pages from 32 to 64. This magazine is devoted to the progress of x-ray and radium from the standpoint of the general practitioner and the specialist in branches other than radiology.

We haven't any fear concerning the lowering of the maternal mortality in childbirth if those permitted to practice medicine have complied with rigid requirements as to education and training, but we do have fear for the consequences when our state legislature is willing to place its stamp of approval upon all the various pseudo-medical cults that ask for recognition, and this is exactly what has occurred in a number of states, and it is these incompetents who oftentimes help to increase the maternal mortality rate. We are not going to make any advances in the protection of the public from preventable morbidity and mortality until we recognize the fact that those who care for the sick and suffering, including the pregnant mother, must have suitable education and training. We must stop giving the illy prepared the legal right to practice.—J. Indiana M. A.

How Bill Nye's "Society of the Pale Blue Asses" has grown, multiplied and given birth to baby societies of many colored asses.

We are being warned that the typhoid incidence curve is rising again and, what is of even greater prophetic significance, the mortality rate also is rising.

The latest statistics (1925) give Soviet Russia 105,062 cases; Mexico, 6739; Japan, 50,829; Canada, 1985, and the United States, 48,318.

What are we going to do about it? Probably not enough until this easily preventable disease begins to destroy a frightful number of lives, and then we will have a "drive" and wipe out the sources of infection for a time.

The American Medical Association is rendering many splendid services to physicians and the public. Among these are the activities of the Council on Pharmacy and Chemistry and the Chemical Laboratory. We read with interest the frequent reports from this laboratory as they are published, but even physicians cannot appreciate the extent of this great public health service without reading the annual reports. This laboratory was organized twenty years ago, and it is largely from its findings that hundreds of promotions of quack remedies have retired from business. The report of this laboratory for the years 1924 and 1925 is now available, and every physician ought to have a desk copy of it.

Physicians will find the answer to many questions asked them about this or that new cure—all in this book, and those physicians who may be inclined to listen too sympathetically to the alleged virtues of many new preparations will find here facts calculated to save prescription blanks.

**Doctors Be Warned**—The following letter has been received by Doctor Pinkham, secretary of the California Board of Medical Examiners from the Treasury Department, Internal Revenue Service, San Francisco, under date of November 17, 1926:

"In reply to your letter of recent date relative to inserting the name and location of the druggist on prescriptions, Form 1403, you are advised that Treasury Decision 3934, approved October 15, 1926, reads as follows:

"Section 1412 of Regulations 60, approved March 14, 1924, is hereby so modified as to provide that physicians, when writing prescriptions, Form 1403, shall not name therein the druggist or pharmacist who shall fill such prescription, and the space provided therefor in the said Form 1403 shall be left blank.

"All regulations inconsistent herewith are rescinded to the extent of such inconsistency."

"You are respectfully informed that notice of the change has been given publicly through the press and generally to inquiring druggists and physicians, and has also been noted in the medical and druggists' magazines and others.

"This office contemplates sending individual notices at an early date to all parties concerned in the Twenty-first District."

The first, last, and whole duty of a public health official lies in the field of preventive medicine and hygiene. He cannot escape or abrogate that duty to others without breaking his oath of office.—Matthias Nicoll, Jr., New York State J. Med.

**Murdering people by the application of poisonous skin beautifiers** at the hands of "beauty specialists" is growing to be quite a pastime in California.

Many people want to know why this is permitted. For the very good reason that there is no law regulating the matter. The Board of Medical Examiners have charged some of these people, who make money by playing with life with about as much intelligence as a child plays with fire, with malpractice. Courts invariably rule that face peeling is not the practice of medicine within the meaning of the law and so these "specialists" only have to secure a municipal license, and may go on killing people without hindrance.

What are we going to do about it? Nothing, until some very prominent woman's life is taken and public opinion arouses the legislature to do its duty.

The St. Pancras Division of the British Medical Association recently passed a resolution "That, the education of the public in health and in the prevention of disease being of national importance, the dissemination of news on health topics should be encouraged. Actual medical instruction might well be controlled by a representative body, and editors should not ask men in private medical practice to write articles under their own name."

In proposing the resolution, Sir Thomas Horder said: "The lay press is certainly the most powerful medium we possess for instructing the public on health matters. We must do our utmost to secure the co-operation of the proprietors and editors of those journals that influence the thinking public: their help is paramount. We need not despair of securing their assistance because, reading the placards on the back of the buses, we find it difficult to believe that some newspapers will care much about printing health information of the orthodox kind."

**Osteoperiosteal Bone Graft**—Experimental and clinical data are presented by George M. Dorrance and George W. Wagoner, Philadelphia (Journal A. M. A.), concerning the application of the osteoperiosteal bone graft for the repair of bone defect and extra-articular ankylosis. They believe that they have demonstrated the ease with which autogenous osteoperiosteal grafts may be obtained, and the satisfactory manner in which they may be used to repair bone defects or produce ankylosis. They emphasize the advisability of laying the graft extra-articularly when ankylosis is attempted. By the use of the pliable osteoperiosteal graft, it is possible to produce ankylosis without opening the joint space—that is, extra-articularly.



## MEDICAL ECONOMICS AND PUBLIC HEALTH

In outlining the new policy adopted by the Federal Trade Commission, which is to include active government efforts to limit fraudulent advertising, Commissioner William E. Humphrey states that there are a number of publications that "will publish any advertisement for money, regardless of truth, honesty, or decency."

"The people of this country," continues Mr. Humphrey, "are annually robbed of hundreds of millions of dollars through these fake advertisements, most of which are plainly false and known to be so by those who take money for their publications. Some of the glaring instances of this class of fake advertisements are the various 'antifat' remedies, medicine, soaps, belts, and other articles—all of them fakes and all of them dishonest, and many of them harmful. Patent medicines for incurable diseases, that are frequently injurious, and often, by holding out false hopes, keep the victim from real help until too late. Beauty creams and lotions and cosmetics that improve the pocketbook of the faker if not the complexion of the user. Fake industrial schools holding out alluring promises of lucrative employment. All these prey upon the weak and unfortunate, the ignorant and credulous. There is no viler class of criminal known among men than this. And what of the publisher that for hire publishes these fake advertisements, knowing them to be false? He is equally guilty with the principal. He shares in his ill-gotten gains. He acts from the same motive. If, in any degree he differs from the principal, it must be one degree lower for his chances of punishment are less, and his responsibilities greater."

According to a statement released to the press by the Department of Public Health, San Francisco consumed 18,660,625 gallons of milk from July 1, 1925, to July 1, 1926, or 51,125 gallons daily. The milk is supplied by 173 dairies from eight counties, and is distributed in San Francisco by eighteen pasteurizing plants. Ninety-seven per cent of this milk is pasteurized before delivery, while the remaining 3 per cent is either certified or guaranteed by and produced under the direction of the San Francisco Medical Society.

Every precaution is taken to insure the people of San Francisco against impure, unclean or unhealthful milk, by constantly inspecting the cows, dairies, shipping facilities, pasteurizing plants and deliveries of milk.

We recently have been supplied with evidence to the effect that certain medical men have been sending samples of blood to the state laboratory for free examination, and charging the patient for the examination. There is no occasion for sending blood from a pay patient to the state laboratories which are intended to furnish services to the indigent only. . . . Frankly, we don't believe that the state has any business in running a laboratory in the way that the state laboratory is run at the present time. We hold no brief for the private laboratories, but we do say that the state has no justifiable right to enter into competition with private practitioners of medicine nor does it have any moral right to encourage dependency and pauperism which must be paid for by taxation upon the public generally.—J. Indiana M. A.

Such practices probably are not limited to Indiana. The problem ought to be met and settled before it becomes acute.

Wherever a full-time health unit has been established, in almost all cases it becomes firmly entrenched in the county government and becomes as much a part of that government as any penal or judicial activity. No longer is the tenure of the health office regarded as a mere gesture toward a popular local practitioner. The modern health officer is as much a county officer as the district

attorney or sheriff.—Walter M. Dickie, California Board of Health Weekly Bulletin.

A reader of the Journal asks us why we are opposed to the Koch cancer cure, and says that we ought to investigate the claims before placing our stamp of disapproval upon the cure. Answering briefly, we will say that we are opposed to any so-called cure that is exploited apparently for commercial purposes, and which has not proven its worth to unbiased minds. The Koch cancer cure has been investigated by a committee of reputable physicians who were appointed by the Detroit Medical Society for the purpose of discovering the truth or falsity of the claims put forth. The committee has made its unfavorable report, and it seems to us that the report is worthy of the acceptance of the medical profession.—J. Indiana M. A.

Three other committees have made unfavorable reports.

Word has been received from the Dermatological Laboratories that they appreciate the patronage given to the D. R. L. arsphenamines by physicians of California, Nevada, and Utah.

These products have been advertised in CALIFORNIA AND WESTERN MEDICINE for some time, and it is gratifying to know that the readers have taken cognizance of the support of the advertisers.

The investment in hospital properties throughout the United States exceeds that of the American Telephone and Telegraph Company and the United States Steel Corporation combined.

In a single year 1117 new hospital buildings have been planned, involving \$309,000,000 in hospital construction, and yet how seriously has the business world taken such facts as these as compared to an announcement that the steel corporation had expended \$10,000,000 more for extensions and improvements?—C. C. Burlingame.

Hoxey, head of the National Cancer Research Institute, of the Hoxide Cancer Cure of Taylorville, Illinois, was arrested recently on the order of the state's attorney on a charge of practicing medicine without a license. We understand that this is but an advance action that will be followed by a charge of fraudulent practices. The Hoxide Cancer Cure is one that is boosted by the Chamber of Commerce of Taylorville, Illinois. It is on a par with other cancer cure fakes.—J. Indiana M. A.

These are some of the reasons advanced against the Sheppard-Towner Act:

The Sheppard-Towner Act fails to give food, shelter, clothing, medicine, or medical care for any mother or any child.

Maternity education should be directed and supervised only by physicians.

Morally and legally, the proposition is indefensible. The Federal Government has no more right to collect money from New York, Illinois, and Massachusetts and divide it among Montana, Wyoming, and New Mexico than it has the right to take money from Jones and give it to Smith. The Federal Government collects more money from a millionaire than from a laborer for the Federal Government, but it has no more legal or moral right to make Illinois "divide up" with Texas or Alabama than it has the right to make Rockefeller "divide up" with Eugene V. Debs.

Maternity backers tell Congressmen that maternity legislation is not wanted unless it can be administered by the children's bureau.—Bulletin of the Medical Women's National Association, October, 1926.

The Eyesight Survey and Service Corporation, with headquarters at Rochester, New York, is an enterprise that is asking for the endorsement of medical men and the patronage of various industrial and commercial concerns. It originates and is promoted by optometrists, and so far as we can see is for commercial gain, directly or indirectly.—J. Indiana M. A.

William E. Humphrey, federal trade commissioner, in an address before the National Petroleum Association in

Atlantic City, recently declared that the public was being robbed of more than a half billion dollars annually through fraudulent advertisements.

"The people of this country," he pointed out, "are annually robbed of hundreds of millions of dollars through these fake advertisements, most of which are plainly false and known to be so by those who take money for their publication."—Ohio State M. J.

Without a great deal of mental effort, it may be shown that practically every human activity is directly or remotely related to public health, and there is today an unquestioned tendency to overload public health service with functions which, at the present time at least, it is not equipped to exercise; while on the other hand, notably in the case of the Federal Government but also in states and local communities, indisputable public health functions are assigned to departments, bureaus and agents of government which, only by the wildest stretch of imagination, logically belong to them and which, in many instances, they are totally unable or unwilling to perform.—Matthias Nicoll, Jr., New York State J. Med.

Henry Walter Gibbons, medical director of the Western States Life Insurance Company, in discussing selection of life insurance risks without physical examination before the Public Health Section of the Commonwealth, Club said:

"The practice of selecting risks for life insurance without the customary physical examination is considered hazardous until a study is made of its limitations and practical application.

"The physical condition of the individual at the time he applies for insurance is only one of many factors which must be considered in estimating the value of a risk. All the other factors, such as build, age, personal history, family history, habits, morals, financial standing, occupation, etc., can be ascertained just as well by an intelligent layman as by a physician.

"In practice the agent is provided with an exhaustive questionnaire on which he records the answers of the applicant over the latter's signature. If a review of this blank, together with a commercial inspection report, indicates impaired health, the applicant is referred to a physician for examination.

"Authorized, experienced agents are permitted to solicit on this basis under the following limitations:

"White race only.

"Ages 15 to 45.

"Self-supporting, unmarried women only.

"Policies not in excess of \$3000.

"No term or special policies.

"Active individuals engaged in nonhazardous occupations.

"Prospects of healthy appearance, normal weight, good personal and family history.

"Prospects of good reputation in regard to character, habits, and financial standing.

"Experience shows that 85 per cent of all examined applicants for insurance are passed as standard. In this 85 per cent a medical examination would be unnecessary. Of the 15 per cent of doubtful risks 2 or 3 per cent are declined for reasons other than medical. Of the remaining 12 per cent about one-half would come within the limits imposed. Therefore there would be an extra hazard to the company in only 5 per cent of all applications submitted under this plan. The extra mortality which might be expected in this small group from impairments which could be detected only by a physician: such as heart, lung, and kidney lesions, it is thought, will be offset by the saving of the medical fees for the entire group.

"Insurance without medical examination has been written in England since 1901. At present as much as £15,000 will be written on a single life, with no more medical guaranty than a certificate of health from the family physician.

"On this continent the Canadian companies were first to adopt the plan in 1920. At present all the Canadian companies operate under it. The conditions influencing these companies were: the example of England; the difficulty of securing medical examinations in the sparsely

settled districts; the refusal of members of some medical societies to make examinations for the established fee; the feeling that a proportion of the examinations submitted by physicians were worthless; a strong opinion that the saving of medical fees on small policies issued to a carefully selected group of individuals in the prime of life would offset any extra mortality that might be expected by accepting a few risks with impairments which could be detected only by a physician.

"For a period of five years the American companies watched the Canadian experiment with interest. When, in 1925, their statistics showed it to be apparently successful, we were quick to adopt the plan. At present 60 per cent of the American companies write nonmedical life insurance. To date, \$250,000,000 of this business is in force in this country.

"The experience so far has been satisfactory. The saving in medical fees has more than offset the mortality loss. In fact, the mortality rate has not exceeded that expected from the examined business. The losses from impairments which could have been found only by a physician: such as heart disease, tuberculosis, nephritis, apoplexy, have not been above normal. The intelligence with which the agents handle the business has been gratifying. The time usually consumed by the agent in getting his prospect to the doctor can be devoted to soliciting more business. Whether the plan increases the total volume of business of a company is still unknown. The fear that companies would be defrauded by dishonest agents and by dishonest seekers for insurance has not been observed.

The feeling is prevalent among companies that, under the restrictions imposed, the selection by this method is just as safe for small policies as by the method requiring physical examination. The tendency at present is toward an extension of the plan to more companies and to increase the amounts written on one life.

"By the adoption of this plan insurance companies have no intention and no desire to minimize the importance of the trained physician to the insurance business. The immediate effect will be to lessen the number of examinations made by about 25 to 30 per cent. However, with the tendency toward more careful selection in large policies; with the further extension of substandard business so as to insure, on some basis, those with impairments which formerly caused declination; and with the further extension of periodical health examination of policyholders, there will be a growing need for expert medical advice.

"The tendency will be to lessen the number of medical examiners, but to make those who engage in the work more efficient and better paid. The examiner will be asked for his expert opinion on doubtful cases discovered by this premedical selection; he will be asked for an exact diagnosis and prognosis in substandard cases; he will be asked to advise policyholders how to prolong their lives. The day of the expert life insurance examination is at hand; the day of the careless, slipshod medical report is waning. The careless examiner has contributed to this movement. The competent examiner will always be highly appreciated in the insurance work."

Physical therapy is a term employed to define the treatment of disease by various nonmedicinal means. It comprises the use of the physical, chemical and other properties of heat, light, water, electricity, massage, and exercise. There are certain definite indications for the use of some one or a combination of several of these physical agencies in the treatment of disease, but to depend on these agencies solely, to use them in lieu of better proved methods, or to employ them without having first thoroughly studied the patient from the standpoint of diagnosis, is harmful practice.—Report of Committee Council on Physical Therapy, J. A. M. A.

Plastic Repair of Finger Defects Without Hospitalization—Gatewood, Chicago (Journal A. M. A.), reports a flap method for covering defects of the palmar surface of the hand or fingers when tendons are exposed. It proved very satisfactory in his case, and does not necessitate hospitalization.



## CALIFORNIA MEDICAL ASSOCIATION

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 PERCY T. PHILLIPS, M. D.....President-Elect  
 ROBERT V. DAY.....Vice-President  
 EMMA W. POPE, M. D., San Francisco.....  
 Secretary and Associate Editor for California

### CONTRA COSTA COUNTY

The Contra Costa County Medical Society held its monthly meeting on October 30, 1926, at the offices of Doctors Abbott and Hely in Richmond.

Doctor McCullough of Crockett presided.

A very interesting and instructive paper on "Urology," accompanied by lantern slides, was given by W. W. Cross of Oakland.

Doctor Vestal moved that the society pass a resolution to the effect that the society express its willingness to co-operate with the American Medical Association in their plan of medical relief in disaster. The motion was seconded by Doctor Campbell and passed.

The president appointed Campbell, Carpenter, and Abbott to arrange for the annual banquet to be held December 4, 1926, at which time election of officers will be held.

A light supper was served at Martin's Grill.

Those present: U. S. Abbott, G. W. Bumgarner, J. W. Bumgarner, P. C. Campbell, L. W. Weishoff, H. C. Carpenter, Rosa Powell, H. Vestal, Richmond; J. Beard, Martinez; J. H. Oldburg, Walnut Creek; J. M. McCullough, W. A. Rowell, Crockett; S. N. Weil, Selby.

S. N. WEIL, *Secretary*.

### MARIN COUNTY

Marin County Medical Society—A meeting of the Marin County Medical Society was held on October 28 at the residence of Dr. A. H. Mays at Sausalito. The following members were present: Doctors Landrock, Larson, W. F. Jones, C. W. Clark, J. H. Kuser, and A. H. Mays. After a demonstration of some rare ancient medical works, dating from the fifteenth and sixteenth centuries which proved extremely interesting. Doctor Mays read a paper on the "Gastrointestinal Disturbances of Cardiac Disease," after which a general discussion followed. The business of the meeting being terminated, the members were invited to the dining-room for supper.

The next meeting will be held on November 18, at the San Rafael Club for the purpose of nomination and election of officers for the ensuing year.

A meeting held on November 18 at the San Rafael Club was called to order by the president, G. M. Landrock, at 8 p. m. The following members were present: G. M. Landrock, A. H. Mays, Charna Perry, C. F. Larson, C. W. Clark, H. O. Howitt, and J. H. Kuser.

The minutes of the last meeting were read and approved. On motion made and duly seconded it was decided to hold the annual banquet on the last Thursday in January, and the secretary was instructed to make all necessary arrangements.

Election of officers for the ensuing year resulted as follows: C. F. Larson, Sausalito, president; C. W. Clark, San Anselmo, vice-president; William F. Jones, San Rafael, secretary-treasurer; G. M. Landrock, Mill Valley, delegate to state society; J. H. Kuser, San Rafael, alternate to state society; H. O. Howitt, Charna Perry, and A. H. Mays, trustees.

Moved and seconded that the meeting in December be postponed to January. Carried.

J. H. KUSER, *Secretary*.

### NAPA COUNTY

Napa County Medical Society—At the regular monthly meeting of the Napa County Medical Society held

on November 3, 1926, at Yountville, the following officers were elected for 1927:

M. M. Booth, St. Helena, president; G. J. Wood, St. Helena, vice-president; E. H. Rue, Calistoga, secretary-treasurer; W. O. Moore, Yountville, delegate; G. I. Dawson, Napa, alternate.

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### ORANGE COUNTY

Orange County Medical Association—The regular meeting of the Orange County Medical Association was held at the American Legion hall in the City Hall building, 320 East Chapman Avenue, Orange, November 2, at 7 p. m.

Business session followed a chicken dinner served by the Women's Auxiliary of the American Legion.

John V. Barrow of Los Angeles presented the paper of the evening on the subject of "Intestinal Protozoa." The speaker, who had done a great deal of work in the development of this field of medicine, gave us all the most recent and worthwhile ideas.

DEXTER R. BALL, *Secretary*.

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### PLACER COUNTY

The Placer County Medical Society held its annual meeting in Auburn, Saturday evening, November 13, 1926, President J. A. Russell presiding.

This being the annual meeting no literary program was presented.

The application of Ernest E. Myers of Roseville, for membership to the society was acted upon favorably and he was elected to membership. The applications of Samuel Charles Glassman and Max Dunievitz of Colfax were received and upon a favorable report they were elected subject to confirmation by the California Medical Association.

The following officers were elected to serve for 1927: J. A. Russell, president; R. H. Eveleth, vice-president; Robert A. Peers, secretary-treasurer; Charles J. Durand, associate secretary; H. N. Miner, delegate; R. H. Eveleth, alternate.

A number of routine matters were considered and the meeting adjourned.

R. A. PEERS, *Secretary*.

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### SACRAMENTO COUNTY

The Sacramento Society for Medical Improvement held its October meeting in the Gold Room of the Sacramento Hotel on the evening of the 19th, President Schoff presiding, with an attendance of fifty-three, the largest attendance thus far this year. The minutes of the September meeting were read and approved. There were no case reports.

Just as October brings to us all the joys of autumn, so this October added to our medical joys by allowing us the pleasure of listening to our nationally known neurological surgeon, Howard C. Naffziger. The doctor chose for his discussion the subject, "The Treatment of Severe Head Injury." He first recounted some most interesting research that had been developing in his department during the last two years' time. This dealt with the comparative results of brain injury due to depressed fractures: first, where there was a sudden shock associated with the depressed fracture; and, second, where the depression was identical with the first, but both the shock and immediate brain injury was eliminated. Naffziger compared the mortality of what he considered "too early surgical interference" in certain types of head injuries. He stressed the importance of recognizing the value of allowing the patient to recover from the immediate shock before rushing to surgery. This is sometimes difficult to do, in the face of everybody wishing for something to be done immediately. He also clearly pointed out that the real factor which would decide for operation is not the condition in which you find the patient at the moment, but is the uphill and downhill course that is progressing from the condition of the patient as it was before. The speaker clearly differentiated what we might expect to find where there was a free fluid collection from those signs that may be expected where we had the fixed type of fluid, that is, edema of the brain. Whereas drainage

is a very important consideration with free fluid present, attempts at relief of pressure through a window where we have brain edema, is of no value. Naffziger cleverly compared such a latter procedure to the opening of a window in a cast when you are having a generalized swelling of the parts enclosed in the cast. He discussed the value of hypertonic solutions in this condition.

Dunlap, Rulison, Gundrum, and Scatena discussed the subject.

The suggestion of establishing a group service for the Sacramento Society by the Retail Credit Association was not deemed a good one. It is thought that this matter of credit and collections is best considered as an individual matter. The Board of Directors also reported the receipt of applications from Ruth Carpenter Hart, Victor W. Hart, V. B. Kennedy, John F. Drew, and Dave Ford Dozier. The above applications for membership took their usual first reading.

We were honored by the presence of the entire Board of Medical Examiners. Dr. P. T. Phillips, who has been re-elected president of the State Board, and who is also president-elect of the state society, spoke of the pleasure of being with us. Judge Biankey, the legal member of the board, also expressed his pleasure at meeting with us.

Schoff called attention to the next meeting of the Northern District Society to be held in Woodland.

The meeting adjourned to the banquet table.

BERT S. THOMAS, *Secretary*.



### SAN DIEGO COUNTY

**San Diego County Medical Society**—The county society had the privilege of listening to Dr. Frank Hinman of San Francisco, October 12. Hinman outlined the procedure in the diagnosis and treatment of genitourinary disturbances. Beginning with the more simple methods and the diseases of the more accessible parts, he went on with the more intricate processes and more difficult cases. With lantern slides he summarized the whole system of genitourinary diagnosis and disease, showing cause and effect by means of diagram and outlines.

On Tuesday, October 19, the Mercy Hospital staff, at the suggestion of its president, Doctor Burger, devoted the evening to a general discussion of what looked like a developing epidemic of some infection, attacking chiefly young adults, characterized by general malaise, a moderate range of temperature elevation and fairly complete icterus. Discussion was opened by Doctor Pollock and continued by Redelings, Frank Carter, Will Potter, Barr, Russell, Strahlmann, Tanner, Ratty, Omelvena, Baxter, Welpton, Dement, and Burger. At the conclusion of the discussion Redelings made a motion that the physicians be urged to report on such cases to the Health Department and co-operate in every way with the authorities.

The medical staff of the County General Hospital were entertained on October 26 by an excellent clinical program presented by the members of the house staff and discussed by the visiting members on service. Those presenting the program were Jacobson, Toomey, Babienko and Potasz of the house staff. Discussion by Rolph, Redelings, Molitor, Porter and Brown of the visiting staff.

Quite a generous delegation of San Diego doctors attended the meeting of the Southern California Medical Association in Los Angeles, November 5 and 6, and enjoyed an excellent program.

November 9 was election day for the San Diego County Medical Society. The officers elected for 1927 are as follows: M. C. Harding, president; J. M. McColl, vice-president; W. H. Geistweit, Jr., secretary; Willard H. Newman, treasurer. Councilors: C. P. Baxter, E. H. Crabtree, Will Potter. Delegate to the state society: Martha Welpton, M. D., two years; alternate, L. B. Mahan, M. D., two years.

The completed personnel of the Council for 1927 will not be available for publication until after January 1.

These elections, held throughout the day, were followed in the evening by the annual dinner of the medical society in the banquet hall of the Golden Lion Tavern. After an enjoyable dinner President Arnold introduced the subject of the annual medical lecture course, which will be given in January, 1927, by Dr. William McKim Marriott of Washington University Medical School, St. Louis. He

will discuss subjects connected with nutrition and metabolism and the chemical processes involved in their disturbances. This annual course is somewhat unique in the history of such efforts, as it is financed by the members of the society as a free will offering to medical education, although all medical men and women are invited to attend in the community or neighborhood. Doctor Higbee, who has been largely responsible for the initiation of these lectures, then spoke briefly on the subject of their support. He was followed by enthusiastic remarks by Harding, Fox, Thornton, Burger, and O'Neill. Mr. Alexander, the promoter of the new Medical Arts Building, spoke briefly as to its equipment, time of its completion, and the cost of its floor space. President Arnold spoke in enthusiastic terms of the policies and attitude of San Diego's new Superintendent of Education, Mr. William John Cooper, in the matter of medical inspection of teachers. He then called for volunteers to form a panel from which the Board of Education might be permitted to call physicians to make physical examinations of teachers when required. The next item on the program was a very interesting picture show by Doctor Redelings, depicting medical men and women of San Diego in their professional, social, and family activities. The results of the election held during the day were then for the first time made public, after which the gathering enjoyed the address of the evening by their distinguished guest from San Francisco, Edgar L. Gilcreest, who spoke in a delightfully reminiscent manner of his personal knowledge of Sir William Osler. He spoke entertainingly of Osler the clinician, the pathologist, the teacher, the writer, the citizen, and dwelt affectionately upon the personality of the "chief," as his students frequently referred to him. It was a magnificent tribute to the personality and the humanity and the enduring energy and application of this greatest of American clinicians.

Our next guest of distinction will be Elliott P. Joslin of Boston, perhaps the greatest living authority on diabetes. He will address the medical society following a dinner tendered to the profession by the Scripps Metabolic Clinic of La Jolla. This dinner will be served at the Casa de Manana, La Jolla, on the evening of November 18.

ROBERT POLLOCK, M. D.



### SAN JOAQUIN COUNTY

**San Joaquin County Medical Society**—The stated meeting of the San Joaquin County Medical Society was held Thursday, November 4, 1926, at 8 p. m. at the local Health Center, 129 South American Street.

The meeting was called to order by Vice-President R. T. McGurk. Twenty-five members were in attendance: E. L. Blackmun, Winifred Biethan, Fred J. Conzelmann, J. V. Craviotto, J. D. Dameron, J. F. Doughty, Linwood Dozier, C. F. English, F. T. Foard, Minerva Goodman, R. R. Hammond, C. D. Holliger, J. P. Hull, H. E. Kaplan, Grace McCoskey, R. T. McGurk, Barton Powell, G. H. Rohrbacher, F. Sheldon, G. H. Sanderson, J. J. Sippy, Margaret H. Smyth, C. V. Thompson, G. J. Vischi, B. F. Walker. Doctors Bishop and Gallegos as visitors, and H. H. Markel as guest and speaker of the evening.

The minutes of the previous meeting were read and approved.

The committee on admission recommended the acceptance of H. L. Gregory as a member of the society. The chairman, in accordance with the constitution, declared Doctor Gregory duly elected an active member of the society.

A communication relative to the society participating in the parade of the American Legion, November 11, 1926, from A. L. Van Meter, chairman Parade Committee, Karl Ross Post No. 16, the American Legion, was read.

Action: Dewey Powell moved, seconded by Dozier, that the secretary reply by letter that the society will participate as individual members, carried.

The Chair announced that the nomination of officers was in order. The president called for the nominations of Board of Directors.

Eighteen members were nominated for the Board of Directors, five for the Committee on Admission, five for



the Committee on Ethics, three for the Committee on Finance, and three for the Committee on Program.

As delegates and alternates for state association: Barton J. Powell, delegate; B. F. Walker, alternate. R. T. McGurk, delegate; Margaret H. Smyth, alternate.

The Chair announced Dewey R. Powell, R. T. McGurk, and Fred J. Conzelmann as a committee of three from the society at large to work with the House Committee of the Medical-Dental Building, consisting of three physicians: L. Dozier, L. R. Johnson, Hudson Smythe; and three dentists, C. L. Daingerfield, H. J. McGillvray, and F. A. McCan.

Dozier moved, seconded by Powell, that this committee be appointed as recommended by the Chair. The committee is to confer with the House Committee of the Medical-Dental Building relative to a meeting place, lounging room and library in the building, with authority to sign the contract for the room, and with the view of ascertaining the expenses necessary for furnishing the room and reporting the same to the society at the next meeting.

W. F. Walker stated that there would be a cornerstone-laying ceremony, and that the president of the California Medical Association has been invited to speak at that occasion. Doctor Walker believed it would be appropriate to have a brief history of the San Joaquin Medical Society, with a list of members to place in the stone.

Dewey Powell moved, seconded by English, that the secretary be appointed as a committee of one to attend to this matter of placing a short history of the society and a list of members in the cornerstone.

The presiding officer introduced Dr. H. H. Markel of the University of California to speak on the "Treatment of Faulty Postures." The speaker stated that for a just appreciation of faulty postures a knowledge of their causes were necessary. Faulty postures were caused by the adaptation of human body to the vertical position from the horizontal. The erect position is the cause of many pathological conditions, as varicose veins, enteropositis or displacements of viscera and kidney conditions which lead to derangement of functions. Faulty positions result from congenital causes such as dislocations existing from birth; or acquired, such as infantile spinal paralysis, tuberculous joints, or disease of bone, resection of ribs, rickets, etc. Rickets lead to spinal curvatures, marked drooping of the shoulders, exaggerated bow-legs and knock-knees, and many other conditions which are distressing in appearance and handicap the individual from becoming a self-supporting citizen. Many of these pathological conditions can be remedied in whole or in part. If treatment is instituted early all can be helped and most of them cured. The speaker showed lantern slides and moving pictures which illustrated in a very striking way many conditions of faulty posture together with the measures and physical exercises needed for their correction.

The subject was discussed by Dameron, Goodman, English, Thompson, and Sheldon, and many questions were asked which Markel answered in a very instructive way in closing his discussion.

Doctor Dameron spoke briefly about his work with crippled children, and introduced the resolution that the San Joaquin County Medical Society lend its moral and professional support to the California Society for Crippled Children by assisting it in organizing and conducting diagnostic clinics for crippled children throughout the county of San Joaquin. The resolution was seconded by Dewey R. Powell and carried.

The Chair was authorized to appoint a committee to accomplish the object indicated in the resolution. The Chair appointed Dameron, Sippy, and Hanson to act as this committee. On request of Dameron that it should be at least a committee of ten, authority was granted to the chairman of the committee to enlarge it.

FRED J. CONZELMANN, *Secretary*.



### SANTA BARBARA COUNTY

**Santa Barbara Medical Society**—The regular meeting of the Santa Barbara County Medical Society was held at the Cottage Hospital on Monday evening, November 8, with President Henderson in the chair.

There were present twenty members and one visitor, Doctor Bischoff.

The minutes of the previous meeting were read and approved.

The first paper of the evening was "Pseudomuscular Dystrophy" by J. B. Manning, with report of two cases.

Nuzum gave a short report on the autopsy findings in the use of colloidal lead in the treatment of tumor tissues, which was discussed by Ullmann, who brought out the use of various preparations of lead, and by Bischoff, who told of the preparation of various forms of lead.

Doctor Nuzum then gave a most interesting report of his attendance at clinics recently held at the Cleveland meeting of Interstate Postgraduate Assembly, and gave abstracts of Doctor Polak's talk on tumors of the uterus; Ledman of New York on the heart; Scott of Cleveland on aortitis; Cabot on tuberculosis of the kidneys; Braash on pyelitis; a South American man on fermentations of intestinal dyspepsia; Plummer on thyroids; Barker on types of individuals; Wood on etiology of cancer; another man on serum treatment; and Mayo on generalities.

The application of W. E. Johnson for membership was read and ordered reported to the censors—Profant, Stevens, and Allen Williams.

No further business coming before the meeting, the same adjourned.

WILLIAM H. EATON, *Secretary*.



### SANTA CRUZ COUNTY

**Santa Cruz County Medical Society**—The annual session of the Santa Cruz County Society was held at Ben Lomond Lodge, Sunday, November 14, with the following members present: Drs. Manuel B. Bettencourt, Watsonville; Willis R. Congdon and Mrs. Congdon, Santa Cruz; Jessie C. Farmer, Felton; John M. Gardner and Mrs. Gardner, Santa Cruz; Willis G. Hatch and Mrs. Hatch, Santa Cruz; W. E. Musgrave, Ben Lomond; Alfred L. Phillips, Santa Cruz; Percy T. Phillips, Santa Cruz; W. A. Phillips, Ben Lomond; Samuel B. Randall, Santa Cruz; Ethel M. Watters, Santa Cruz; and Dean S. Woodward, Watsonville.

All officers were re-elected for 1927, as follows: W. E. Musgrave, president; A. L. Phillips, vice-president; D. S. Woodward, secretary-treasurer. Delegate to California Medical Association, Ambrose F. Cowden; alternate, Jessie C. Farmer.

Dues for 1927, including State Association dues, were fixed at \$12.

#### New Fee Schedule Adopted

The public quite as much as doctors are interested in doctors' fees. The society has had a revision of their old schedule under advisement for some months, and at the annual meeting unanimously agreed to the following, to be in effect until modified by further action. The schedule is introduced with these important paragraphs:

In adopting the following fee schedule, the Santa Cruz County Medical Society wishes it clearly understood that the quoted fees are average fees for average services under average conditions.

Nothing in the schedule shall be in conflict with a physician's duty and privilege to adjust his fees to the patient's ability to pay, nor with the fact that every citizen is entitled to all essential health care regardless of his economic status, as provided for in our ethics:

Office visits.....	\$ 2.50
General examinations or so-called periodic health examination (exclusive of laboratory, x-ray, and similar special services).....	5.00
Telephone advice.....	1.00
Laboratory fees (each specimen, depending on nature of specimen and required work).....	\$1.50
Vaccination toxin-antitoxin, antityphoid and similar protective inoculations (each).....	2.50
(Plus cost of material)	
Hospital visits.....	3.00
Home visits (7 a. m. to 10 p. m.).....	3.00
Home visits (10 p. m. to 7 a. m.).....	5.00
Mileage, beginning one mile from office—per mile.....	1.00
Consultations: Consultant.....	10.00
Attending physician.....	5.00

Anesthetic .....	\$5.00 to 20.00
(Plus cost of material)	
Assisting at operation.....	\$10.00 to 50.00
Normal confinement (including all essential prenatal care and six weeks' postnatal).....	50.00
Service to additional patients at the same family visit .....	1.50
Surgery: Removing tonsils and/or adenoids.....	50.00
Minor operations.....	\$ 5.00 to 100.00
Major operations.....	100.00 to 500.00
X-ray examinations or treatments.....	\$5.00 to 50.00
Dental X-ray: First tooth.....	1.50
Each tooth thereafter.....	1.00
All teeth.....	7.50
Other diagnostic or treatment services requiring expensive apparatus.....	\$5.00 to 25.00

Mr. Morton, manager of the Ben Lomond Lodge, was tendered the thanks of the society for the excellent arrangements provided for the meeting and for the unusually good luncheon served at 1 o'clock.

### Next Meeting

At its next meeting, Wednesday, evening, December 8, at 8 o'clock, the society will be the guests of Dr. and Mrs. Grant Hatch at their home in Santa Cruz. A prominent medical educator from San Francisco will discuss the problem of recognizing heart disease and the management of patients suffering from this complaint. Members of the society will add their experiences and opinions to those of the invited guest.

### Projected Work for 1927

Most of the doctors of Santa Cruz County who are eligible by education and conduct to become so, are now members of the medical society. Increasing attendance at meetings and in interest has stimulated the members to undertake an extensive program for the next year. Two of the meetings will be open to all citizens. These will be addressed by speakers of prominence versed in popularizing medical information; one session will be a joint four-adjacent counties medical meeting to be addressed by prominent invited speakers; one meeting will be a joint one by physicians, attorneys and dentists, and the rest will be devoted to problems of particular concern to all practicing physicians.

This is an unusual undertaking for the doctors of a small county, and the value to all citizens of such efforts is incalculable.



## SISKIYOU COUNTY

**Siskiyou County Medical Society**—The Siskiyou County Medical Society met in the Yreka Inn, Yreka, on the 7th of November. Among those present were: Ankele, Bathurst, Dickinson, Heaney, Kalman, Morse, Nutting, Pius, Tebbe. The members, joined by Mrs. Morse and Mrs. Tebbe, were guests of the society at dinner. Following that, Doctor Dickinson, president, called the meeting to order. Minutes and correspondence were read and approved. The secretary was instructed to write to Doctor Cartwright of Dorris inviting him to join the society. The resolution of Doctor Bathurst that a short report on the proceedings of meetings should be published in the local papers was unanimously accepted. The following officers were elected for the coming year: C. W. Anekele, Dunsmuir, president; S. S. Kalman, vice-president; H. A. Morse, Hilt, secretary-treasurer; S. S. Kalman, delegate; alternate to be left open.

C. C. Dickinson read an excellent paper on "Rheumatic Arthritis," which was discussed at length. The next meeting will be held in Dunsmuir in the spring as early as road conditions permit.

S. S. KALMAN, *Secretary*.

## CHANGES IN MEMBERSHIP

**New Members**—John Brady Rogers, Los Angeles; B. Frank Sturdivant, Pasadena; Charles R. Longworth, San Diego; Arthur H. Beede, Arthur L. Bloomfield, George

B. Dewees, Walter H. Frolich, Charles Caldwell Landis, Walter Lawrence, Rober B. McKenzie, Stanley Mentzer, Raymond Joseph Millzner, Victor Sheldon-Smith, Ernest Wolff, San Francisco; Hunter Lee Gregory, Winifred Biethan, Stockton; Raymond W. Bliss, Margaret D. Baker, Santa Ana; Arthur Colby Robbins, Garden Grove; Lewis Henry Stanton, Orange.

**Transferred**—George A. Broughton, from Los Angeles County to Ventura County.

D. L. Burgeson, from Los Angeles County to Orange County.

Stephen A. Craig, from Los Angeles County to San Bernardino County.

Walter M. Dickie, from Los Angeles County to Alameda County.

C. L. Emmons, from Los Angeles County to San Bernardino County.

Francis C. Ferry, from Los Angeles County to Orange County.

M. P. Hambleton, from Los Angeles County to San Bernardino County.

W. G. Pitts, from Los Angeles County to San Francisco County.

R. M. Ritchey, from Los Angeles County to Napa County.

J. H. Titus, from Los Angeles County to San Bernardino County.

Herbert F. True, from Los Angeles County to San Francisco County.

L. E. Wilson, from Los Angeles County to Monterey County.

J. E. Whitlow, from Los Angeles County to Ventura County.

H. W. Vollmer, from Riverside County to Napa County.

**Deaths**—Delamere, Henry S. Died at Berkeley, November 4, 1926, age 67. Graduate of the University of Vermont College of Medicine, 1883, and licensed in California, 1888. Doctor Delamere was a member of the Alameda County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Hirschkowitz, Lesser**. Died at San Francisco, October 27, 1926, age 67. Graduate of the University of Berlin, Germany, 1885. Licensed in California in 1888. Doctor Hirschkowitz was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Holcombe, Arthur L.** Died at Long Beach, November 2, 1926, age 61. Graduate of the University of the city of New York, 1888. Licensed in California in 1889. Doctor Holcombe was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Lay, Frederick Herbert**. Died at Stirling City, September 11, 1926, age 75. Graduate of the Bellevue Hospital Medical College, New York City, 1878. Licensed in California, 1895. Doctor Lay was a member of the Butte County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Paul, E. Burton**. Died at Los Angeles, September 21, 1926, age 43. Graduate of the Washington University Medical College, St. Louis, Missouri, 1907. Licensed in California in 1919. Doctor Paul was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Smith, Frank Edwin**. Died at Los Angeles, October 17, 1926, age 36. Graduate of the University of Pittsburgh, Pennsylvania, 1914. Licensed in California in 1919. Doctor Smith was a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.





HUBERT NADEAU  
1838-1926

It is unusual that a medical association in any part of America can record the affiliation of a member for forty-nine years; but the Los Angeles County Medical Association does record that fact in the case of Dr. Hubert Nadeau, who died here last week. And during these last years of retirement Doctor Nadeau maintained his membership in the regular manner with jealous pride.

The Association has an equal pride in recording this fact because of the loyalty, integrity and fine professional character of Doctor Nadeau.

Dr. Hubert Nadeau was born in Marieville, Canada, May 11, 1838, of French-Canadian descent.

He attended the St. Hyacinth College in Canada and later was a student at the College of Physicians and Surgeons of Montreal, receiving his M. D. degree in 1862.

For about four years he was in private practice in Canada, later removing to Chicago, where he remained for ten years, coming to California in 1876, having been in Los Angeles since that time.

He served as United States pension examiner from 1882 until 1884 and was coroner of Los Angeles County from 1875 until 1884. He was also ex-member of the Los Angeles Board of Health. Had the chair of clinical pediatrics, College of Medicine, U. S. C.

The Los Angeles County Medical Association was founded in January, 1871. It was legally incorporated in 1878, but it had functioned under the original name from 1871. Doctor Nadeau became a member in 1877, and was its vice-president in 1882, and president in 1883. He was very active in all of the duties of membership as long as he was in active practice. For the past fifteen years he has been retired, but he watched the workings of the organization with undiminished interest. He was always among the first to pay his annual dues, and objected to any movement to place him on the honorary list, saying he wanted to be regarded as an active member as long as he lived. He was one of the first to subscribe to the Permanent Quarters Fund and paid his subscription promptly.

Such devotion to the high purposes of organized medicine over so long a period is indicative of the highest

ideals, the character, the conscience and broad vision of the individual. Young men will do well to pause and consider the life of Dr. Hubert Nadeau.

A committee has been appointed to draft suitable resolutions expressing the high regard for this character and devotion, which will be inscribed upon the records for all time.—Bulletin Los Angeles County Medical Association.



WILLIAM HASTY FLINT  
1852-1926

William Hasty Flint, born May 20, 1852, West Baldwin, Maryland, died September 5, 1926, Santa Barbara, California. He was graduated from Cornell University (B. A.), 1874, and received his degree of Doctor of Medicine from the Bellevue Hospital Medical College, 1877. The years from 1881 to 1882 were devoted to postgraduate study at the University of Bonn, Germany, and the University of Lausanne, Switzerland. He then returned to America and for a period of ten years practiced in New York City, being associated with Dr. Astin Flint, Sr. (to whom he was related), and was a member of the visiting staff of the Presbyterian Hospital, New York City. Doctor Flint came to Santa Barbara, California, in 1893, where he was engaged in active practice until his death. He was a member of the Santa Barbara County Medical Society, of which he was twice president, California Medical Association, and the American Medical Association.

The high esteem in which this fine man was held by both patients and friends is well expressed in the following quotation from a letter written by one of his old friends to Doctor Flint's daughter shortly after his death: "He had a rare and beautiful philosophy of acceptance of adversity with a sweet smile and courage that never failed him, and possessed in the fullest measure those qualities which make the physician beloved by his patients."

He was a kind, altruistic and learned physician, whose buoyant spirits radiated through all the years of his full and useful life. His brilliant and constructive mind, together with his professional attainments and social charm, endeared him to all who had the good fortune and pleasure of his acquaintance. The bereavement of his family is shared by his many friends, both lay and medical.





JAMES WILLIAM JESSE

JAMES WILLIAM JESSE

1857-1926

For thirty-five years a practicing physician and political figure in Santa Rosa, Dr. James William Jesse died at his home November 3, 1926, following a collapse suffered six weeks before at his office. He was born in Mexico, Missouri, and came to Santa Rosa thirty-five years ago and quickly established a large practice. He was well known as one of the foremost physicians and most skilled surgeons in northern California.

He served for many years as county physician, and a number of years ago established the Mary Jesse Hospital, named in memory of his mother. Although to those who did not know him he was of seemingly gruff personality, his charitable works have been exceeded by few. No person in need of medical attention was ever refused it, and one bed in his hospital was always at the disposal of the sick and needy. He himself disclaimed this, but there are many in Sonoma County who bear witness to his humanity.

Doctor Jesse is survived by his wife, Mrs. Alice Jesse, a daughter, Mrs. Bryant Necker of Los Angeles, and two granddaughters, Margaret and Mary Elizabeth Necker.

SAMUEL HAWKINS BUTEAU

1864-1926

Dr. Samuel Hawkins Buteau, son of Dr. Samuel Aubert Buteau and Helen N. Hawkins Buteau, was born January 4, 1864, at Cape Gerardo, Missouri. The family moved

to Centerville, California, in 1870 and his father continued to practice medicine there until the time of his death in 1896.

Doctor Buteau attended the Alviso school situated between Centerville and Alvarado until he reached the age of 13, and then attended the Oakland High School. After leaving the Oakland High School he took the Alameda County teachers' examination and passed with honors, securing a first grade certificate. He was then but 17 years of age. Because of his years, he was not qualified to fill a teacher's position in Alameda County, so he took another examination in Kern County and secured a teacher's position there. The following year he was appointed principal of the Warm Springs school near San Jose, and while there he decided to take up the study of medicine. All the spare time he had he spent in reading medicine with a very intimate friend, the late Dr. Charles Fisher, and with Doctor Allen of Centerville. Later he became the principal of the San Lorenza school. From here he entered Cooper Medical College, graduating in the class of 1889.

Soon after his graduation he was appointed resident physician of the Oakland General Hospital situated on Eighth and Myrtle streets. He continued in that position for about two years and during that time was allowed the privilege of private practice. After leaving the Oakland General Hospital he opened an office at Thirteenth and Broadway, in the same building in which he was located at the time of his death. Several years after his graduation from Cooper Medical College he served as an instructor and teacher in histology. He spent the major portion of the year 1900 in Europe studying his profession and familiarizing himself with the arts of the old world. On his return from Europe he became associated with Fabiola Hospital, where his ability was recognized



SAMUEL HAWKINS BUTEAU



and he soon came to dominate the character of work performed in that institution.

Early in his medical career he became a warm friend of Dr. Joe Price, with whom he spent much time and study. Through Doctor Price he learned to know John B. Deaver, and on his early Eastern sojourns he spent much time at the clinics of these two men.

Early in his career he became the recognized surgeon of Oakland. He was the visiting surgeon at Alameda County Hospital for nine years. In 1909 he was appointed a trustee of the Samuel Merritt Hospital, which was nearing completion. Doctor Bateau took the reins of this institution and guided it up to the time of his death.

Doctor Bateau, being a natural teacher, taught more young doctors surgery than any other physician in this community. He was president of the Alameda County Medical Association, a Fellow of the A. M. A., and the American College of Surgeons. He held membership in the National Surgical and Gynecological Society and the Pacific Coast Surgical Society. He was one of the organizers and the first president of the Oakland Surgical Club.

## UTAH STATE MEDICAL ASSOCIATION

W. R. CALDERWOOD, M. D., Salt Lake.....President  
E. H. SMITH, M. D., Ogden.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary  
J. U. GIESY, M. D., Salt Lake.....Associate Editor for Utah

### RUTS

One of the easiest things to get into and one of the hardest things to get out of, the rut is one of the greatest perils which any man may find on the road between cradle and grave. Hence the rut is perhaps the greatest menace of the physician's life. To do the same thing over and over in the same way is so easy, especially when quite frequently it gives a fairly high percentage of good results. It is so easy to hold fast to old tenets rather than to unlearn old lessons and accept new creeds. Yet the progress of the world has ever been activated by those who did not follow the rut or the groove—by men who blazed a new path rather than being content to follow the rutted road.

And one of the main troubles with the rut is that, like the deep groove in a roadway worn by much use, it is confining—makes for a narrow-mindedness on the part of him who falls into its habit, limits as it were his point of view, tends to make of its follower a confirmed egotist. Generally one finds the man in the rut a man who has an unjustified sense of his own ability rather than the reverse. And only when he is jolted or urged or pushed or shoved or otherwise jacked up and out of his narrow track, does he begin to realize the wider horizon beyond other men of other views.

Yet when the rut no longer leads in the direction which every true-minded physician should travel—the direction of the greatest efficiency in end results, then it is time to leave it and follow the newer, better path. And there are so many means today by which the practitioner of the healing art may lift himself from the ruts of professional life. There are magazines galore, more than he has time to read. There are societies with scientific programs he may well attend and profit in attending. There are review classes existing or which he himself perhaps may organize. There are trips to be taken to centers of knowledge, to conventions where he may rub wits with the leaders in his craft. There are great institutions—great medical workshops as it were—in which he may spend a few weeks, and from which he may return with the old-time enthusiasm which marked his student days revived. Rarely does the writer attend a meeting of medical men without bringing away from it either new knowledge or a re-emphasis on old knowledge, or at least a diversion of his thoughts on certain subjects into new channels and away from old ruts of thought.

We admit that there are times when getting out of a rut is as uncomfortable as getting out of a warm bed on a cold winter's night in response to some frantic appeal for aid which may or may not be justified—may be nothing more than that frantic fear so often excited by the midnight hour when

**Bedside Study of Air Hunger**—By air hunger is meant the subjective experience of air want. Dyspnea, tachypnea, hyperpnea, and cyanosis are attendant phenomena and can be evaluated by objective observation, but the feeling of air hunger is what alarms the patient and leads him to seek medical aid. The physician is called for a single reason, and that is to relieve air hunger, a subjective symptom that always is alarming to the patient. According to C. F. Hoover, Cleveland (Journal A. M. A.), the symptom may be due to a misinterpretation of a nervous experience that very commonly plagues introspective persons, although their internal and external respiration is quite normal. Genuine air hunger may originate from disturbances in the nerve supply to the lung; or there may be disturbances in the cardiorespiratory function, or internal respiration may be disturbed by alteration of the chemical composition of the blood or by disturbances in the lymph or blood supply to the respiratory center. The most common exhibition of air hunger is associated with cardiorespiratory disease, and as the cardiac and respiratory functions are interdependent, the first problem is to learn how much each may share in producing the symptom. Obviously, if air hunger is due to pulmonary stasis, cardiac stimulation is indicated. If lung ventilation is at fault the problem is different. Hoover discusses: (1) paroxysmal tachypnea of which he has seen six cases, occurring in the course of mediastinal disease which in two cases was associated with unmistakable syphilitic disease and syphilitic aortitis. Two were cases in which either syphilis or tuberculous disease was the cause, as both diseases were present, and two patients were tuberculous. The attacks in one patient were always associated with bradycardia. (2) Paroxysmal hyperpnea of which he has seen only one case; slumber apnea and waking hyperpnea; cardiovascular disease and myxedema. There is an interesting relation between air hunger and retention of body fluids that is sometimes seen in chronic cardiovascular disease. Improvement follows the use of some digitalis or theobromin preparation, and as the dropsy recedes the cardiectasis diminishes and the rate and volume of the pulse improve. But there are cases in which digitalis and caffeine in large doses are ineffectual, but with the administration of merbaphen (nova-sorol) by the intravenous method the dropsy recedes, air hunger ceases, and the pulse pressure, heart rate and size of the heart's chambers are unchanged.

All in all, human nature is essentially the same. Four thousand years ago there were unquestionably charlatans and unquestionably credulous believers to fall for what the charlatans told them. There are today in the United States more than a hundred varieties of quackery and cultism. With the laxity of our legislation, with the methods by which cults propagate in this country, with the fertility of invention that characterizes the American mind, ten years from today, if there are new discoveries in fundamental sciences, there will be cults founded on each of them, and at least ten million imbeciles who think they are smart enough to try them.—Morris Fishbein, Minnesota Med.

grim ghosts of phantasy walk. We admit that at times being shaken out of a nice, well-worn rut, to a realization of our own paucity of knowledge on a subject concerning which we had formerly felt very well satisfied, is as spiritually nauseating to the shakee as a dose of salts. But, on the other hand, it is also admitted that a cold plunge may have a tonic effect and that salts is a good eliminating purge to free one's system from certain physical dross. And we claim that at times, being shaken from a rut of personal conceit, to find one's poor little knowledge literally naked in the glare of a veritable ballroom of well-dressed information, may well be very good for the soul—so good indeed that one finds himself inspired to keep out of said rut rather than crawl back.

And we allege that in this day and age of ready communication, ready and progressive information, aggressive and progressive research, the man who doggedly follows a rut has very little excuse. Perhaps he fancies that in the end the rut will lead him somewhere. And perhaps he is right. But it is more apt to lead him to dwindling ability, lessening desert of confidence and trust by those he should best serve, final realization of his own shortcomings, and so oblivion. And so we say, beware of the rut in these days when the road to knowledge, like most of the well-traveled roads of the nation, is paved.

### TANNIC ACID

Tanned burns is the latest nowadays. And why not? There seems to be a very excellent reason or number of reasons in the words of the late lamented Mr. Post. Primarily tannic acid is an active chemical coagulant. Shock, be it of traumatic, surgical or biochemical origin, would seem to depend upon the active absorption of the split protein molecule before any or everything else. And this being the case, anything which will prevent the absorption of the broken-down molecule with the resultant toxemia will prevent the phenomena of shock and give a fresh lease on life. This, seemingly, tannic acid does when used in the treatment of burns. And one may suppose that it accomplishes this in several ways. Primarily the chemical action would seem to lock the destroyed proteins in an insoluble or very slightly soluble coagulum. Secondly, being an active astringent, it produces a narrowing of the efferent and afferent blood stream, hence a diminished inflammatory reaction which must of necessity mean a lessened opportunity for absorption.

It has been noted that burns dressed with moist tannic acid 2½ per cent dressings for the first thirty-six to forty-eight hours show a darkened surface (are tanned) and manifest far less bacterial growth than others not so treated. Yet we may assume that these wounds are as greatly infected as any other routine control. One wonders if then the tanning, coagulating process, does not lock the micro-organism in a restricting net, as it were, and exert a bacteria-static effect at least.

And this tanned surface—means what? To all intents and purposes a protective surface under which nature may manifest her wonderful recupera-

tive forces, of course. And more than this. Under nature's own forces of always seeking to discard the healing covering of "scab" when its purpose is fulfilled, it actually would seem to insure a resulting hyperemia, following the primary astringent—produced ischemia, with all such a hyperemia's healing effects. And if this hyperemia is fostered by radiant heat and small doses of actinic light, healing will be still more quickly accomplished. We expect to see "tanned burns" become all the rage.

**Utah News**—Frank B. Steele, secretary of the State Association, attended the meeting of the state secretaries A. M. A. at Chicago the past month. While on this trip the doctor interviewed several Chicago men, with a view to gaining their participation on the scientific program of the next state meeting.

We are pleased to announce the following appointments on committees of the State Association by President Calderwood:

**Council**—J. R. Morell, J. C. Landenberger, E. G. Hughes.

**Health and Public Instruction**—W. Christophersen, E. W. Neher, R. A. Perse, H. Jeidell, S. Paul.

**Advisory on Hospitals**—J. W. Aird, J. W. Hayward, A. C. Behle. Two to be appointed.

**Conference Committee for State Industrial Commission**—R. Groesbeck, Scott A. Jones. One to be appointed.

**Committee on Scientific Program**—John Z. Brown, W. N. Pugh, Fuller Bailey, J. U. Giesy.

**Committee on Postgraduate Work**—J. A. Phipps, E. L. Skidmore, R. S. Allison, J. J. Galligan.

**Professional Welfare and Ethics**—S. D. Colonge, D. K. Allen, A. C. Callister, E. I. Dumke, H. G. Merrill.

**Committee on legislative affairs** to be appointed.

As the Medical Arts Building which will house upward of a hundred doctors and dentists nears completion, interest in the project grows. Viewed from the outside the building is a credit, and the interior begins to show that it will be no less beautiful. One of the major interests is the auditorium and convention hall, in which it is expected many of the future scientific meetings in the city will be held. Occupancy is expected by January 1.

Quite a number of the local physicians from Utah attended the A. C. S. convention in Montreal.

**Minutes of the Salt Lake County Medical Society** (M. M. Critchlow, secretary)—Meetings of this society have been held as follows:

**October 20**—A special meeting of the society was held at the Commercial Club, Salt Lake City, Wednesday, October 20, called to order by Vice-President W. G. Schulte. Forty-nine members and four visitors were present.

The society was very fortunate in having Dr. Edouard Rist of Laennec Hospital, Paris, address it on "Pitfalls in the Diagnosis of Pulmonary Tuberculosis." He outlined the necessary data for diagnosing pulmonary tuberculosis, warned about the possible mistakes in the laboratory, and then proceeded to a discussion of intrapulmonary conditions which simulate the symptoms of and are often mistaken for pulmonary tuberculosis. He next outlined the constitutional disorders which may simulate tuberculosis and finished his discussion by enumerating the conditions of the upper respiratory tract, diseases of which, in his opinion, were most often mistaken for tuberculosis.

His address was a masterly one, and was greatly appreciated by the society.

**October 25**—A regular meeting was held at the Commercial Club, Salt Lake City. The meeting was called to order by President F. H. Raley. Forty-five members and six visitors were present.

Minutes of the regular meeting held October 11, 1926,



and of the special meeting held October 20, 1926, were read and accepted without correction.

No clinical cases were presented.

The first paper on the scientific program was given by F. A. Goeltz on "Obstruction as a Causative Factor in Renal Pathology." He illustrated his talk with lantern slides and brought out very clearly the conditions resulting from obstruction in the genitourinary tract. This very interesting talk was discussed by W. G. Schulte, E. S. Pomeroy, and John Z. Brown.

The second paper was given by L. L. Daines on "Per-nicious Anemia." His paper was devoted mostly to his work and that of others on bacillus welchii as a causative factor in the disease and to treatment. His reports as to the results obtained from a high protein diet were very encouraging. Discussion by F. B. Bailey, G. A. Cochran, G. G. Richards, and L. E. Viko.

**November 8**—A regular meeting was held at the Commercial Club, Salt Lake City, Monday, November 8, called to order by Ex-President E. D. Hammond. Seventy members and three visitors were present.

Minutes of the previous meeting were read and accepted without correction.

F. M. McHugh demonstrated an Albino patient and showed the absence of pigment in the retina.

Vice-President W. G. Schulte took the chair.

The first paper of the scientific program was entitled "Diagnosis of Gall Bladder Diseases," by G. G. Richards. He reviewed three hundred cases of cholecystitis and ninety cases of cholelithiasis. Eighty cases of the above series have received intravenous injections of tetraiodophenolphthalein sodium. His paper was illustrated with lantern slides. He brought out distinctly the advantages of the dye injections in gall bladder diseases.

President F. H. Raley took the chair.

The next paper was given by Ralph T. Richards on the "Surgical Treatment of Gall Bladder Diseases." He discussed the surgical technique for the various gall bladder diseases and anesthetic and preparation of the patient.

These very interesting papers were discussed by J. P. Kerby, Clarke Young, W. N. Pugh, A. A. Lipkis, W. R. Tyndale, and C. E. Barrett.

Communications from F. B. Steele, secretary of the State Medical Association, and Commissioner T. T. Burton were read.

Sol G. Kahn, chairman of the Committee on Public Health and Legislation, read a resolution pledging the society's co-operation with the City Commission. He moved that it be adopted, seconded by John Z. Brown, discussed by W. R. Tyndale and W. F. Beer, and unanimously carried.

J. P. Kerby moved that a committee be appointed to arrange for a banquet to be given by the society in honor of the Salt Lake County Dental Society. Discussed by G. C. Richards, seconded and carried. Fifteen opposing votes.

The number of deaths reported annually among infants under one year of age is about two millions in India. This, of course, excludes children probably equal in number who are stillborn. From an economic point of view, it is perhaps even more serious than conditions which kill one-fifth of the nation's children within a year of birth act also to a large extent on the four-fifths that survive and tend to make them during the rest of their lives, less fit than they might have been. Colossal ignorance of the masses, social customs, insanitation, insufficiency of medical relief, poverty and economic distress, all contribute not a little to the high mortality among infants.—The Antiseptic (Madras), August, 1926.

Recently the oranges and chimpanzees in the London Zoo were moved from the old-fashioned "green house" type of cages to new monkey houses, provided with ample open ventilation and roofed with special glass which allows the passage of the ultraviolet rays of the sun. One result was fine crops of baby apes from parents theretofore nonproductive.

"Wild gland" rejuvenators please take notice.

## NEVADA STATE MEDICAL ASSOCIATION

W. L. SAMUELS, M. D., Reno..... President  
HORACE J. BROWN, M. D., Reno..... Secretary and Associate Editor for Nevada

### PRESIDENT'S ADDRESS, 1926 SESSION

By ARTHUR J. HOOD \*

IT IS with a keen sense of the honor you have so graciously conferred upon me as president of the Nevada State Medical Association, that in its behalf I bid you a hearty welcome to the twenty-third annual meeting. There are no excuses on our part to offer, nor indulgences to beg for the nature of this program. The committee has worked hard to give you an intensive as well as a varied two days' session of interesting subjects. We aspire to the hope that you will find the program both interesting and instructive.

None the less active in their efforts to please you is the Entertainment Committee. It is a matter of tradition that this body has always lived up to its record of full expectancy. Let me assure you all at this session of a cordiality and a hospitality of which there is none more genuine, none more sincere.

Dr. Harvey Cushing in an address this year expressed the thought that a common devotion to science tends to a mutual loyalty. There is no line more imaginary, as respects our calling, than that which exists on the Eastern and Western borders of this state. This loyalty, bound by ties of common interest, nourished by frequent associations, and fostered through courtesy in an official medical journal for three states has resulted in the blotting out of all lines of division.

The medical profession of Nevada still stands upon the frontiers of medical civilization. It is composed for the most part of general practitioners rather than those favored with a specialty. This is not without its advantages. We cannot help but believe that perspective has been widened and that resourceful faculties have been developed by varied experiences.

There is a certain romance attached to the general practice of medicine. It is given to its followers to first welcome the startled cry of the new-born, to correct and alleviate the physical wrongs of youth, to render assistance in the trials of maturity, to furnish comfort and solace to advanced age. And when the curtain is drawn across the fitful state of life, the prompter is still most frequently the practicing physician, familiarly known as the Family Doctor. It is with pride that we point to those who have served this apprenticeship of diversity in these, our

\* Arthur J. Hood (Elko, Nevada). M. D. University of Michigan, 1903; B. S. Adrian College, 1899. Graduate study: London, 1908. Previous honors: Chief of staff, Elko General Hospital, 1921 to 1923. Present hospital connections: Member of staff, Elko General Hospital. Scientific organizations: Elko County Medical Society, Nevada Medical Association, A. M. A., Pacific Association of Railway Surgeons. Present appointments: County physician, Elko County, Nevada; district surgeon, Southern Pacific Company; division surgeon, Western Pacific Railway. Practice: General since 1904.

ranks, and later, elsewhere, added fame and luster not only to themselves, but to medical science itself.

There are certain problems before the Nevada Medical Association awaiting solution. Many of these can be assigned to those specially designated, and who are fully competent to solve them. One committee, in particular, needs and deserves the fullest co-operation of each and every member. I refer especially to the Judicial Committee and to the acts of the Nevada Legislature. It is needless to say that this should be in accord with a strict honesty of purpose, subject to no variance. There is no time more opportune than the ensuing few weeks to render your valuable assistance to this society in correcting present evils and thwarting potential dangers.

In concluding, a word of appreciation would be offered to the Nevada State Hygienic Laboratory. Its service has been rendered freely and without stint. There are none of us with practices so meager but who have felt the strength of this arm in diagnosis and its power in preventive medicine. It has raised a loftier standard for the profession throughout our state.

#### PROCEEDINGS OF THE TWENTY-THIRD ANNUAL SESSION AT LAUGHTON SPRINGS, SEPTEMBER 24, 1926

The meeting was called to order by the president, Arthur J. Hood of Elko, at 9:40 a. m. The president made his welcoming address, after which the first paper of the scientific program was called for. The program was as follows:

J. Edward Harbinson, Woodland, California, "Joint Pains and Uric Acid Diathesis." Discussed by C. H. Lehnars, E. H. Falconer, P. K. Brown, and C. F. Welty. Discussion closed by Harbinson.

Miley B. Wesson, San Francisco, "Treatment of Malignant Tumors of the Testicle and Scrotum." Discussed by F. Hinman; closed by Wesson.

E. L. Creveling, Reno, being unable to attend the meeting, his paper was read by J. LaRue Robinson, Reno. The title of paper, "Toxic Amblyopia." Discussed by J. A. Fuller; closed by Robinson.

Ernest H. Falconer, San Francisco, had as his subject, "Blood Transfusions in Pernicious Anemia." Discussed by J. E. Harbinson, P. K. Brown, W. F. Cheney, and Emge. Discussion closed by Falconer.

Clain Fanning Gelston, San Francisco, "Certain Acute and Chronic Upper Respiratory Tract Infections in Children." Discussed by C. F. Welty, I. S. Egan, J. E. Harbinson, and C. E. Piersall. Discussion closed by Gelston.

Anne B. De Chene, Sparks, Nevada, chairman of the committee on diseases of the eye, read her report, she being unable to be in attendance at the business meeting.

Philip King Brown and Leo Eloesser, San Francisco, "Symposium on Lung Compression and Surgery." Discussed by T. W. Bath, E. L. Gilcreest, and R. O. Schofield. Discussion closed by Brown and Eloesser.

E. L. Gilcreest, San Francisco, "A Study of Fractures in and About the Ankle Joint." Discussed by W. H. Riley, R. A. Bowdle, James P. Warren, L. Eloesser, and G. W. Pierce. Discussion closed by Gilcreest.

W. W. Washburn, San Francisco, "Surgical Lesions of the Abdomen—Some Diagnostic Problems." Discussed by T. W. Bath, L. A. Emge, and E. L. Gilcreest. Discussion closed by Washburn.

Alexius M. Forster of Colorado Springs, Colorado, being unable to attend, Charles E. Savier, Colorado Springs, was given his place on the program and read a paper on "Heliotherapy." Discussed by J. F. Percy, E. L. Gilcreest, E. H. Falconer, L. Eloesser, and C. E. Piersall. Discussion closed by Savier.

W. Edward Chamberlain, San Francisco, appeared for

Howard E. Ruggles, who was unable to attend, and read a paper entitled, "Usefulness of Small Doses of X-ray." Discussed by C. E. Piersall and L. Eloesser. Discussion closed by Chamberlain.

This completed the scientific program for the day, and the meeting was adjourned until 9 o'clock a. m., September, 25, 1926.

#### September 25, 1926

Meeting called to order at 10:15 o'clock a. m. by A. J. Hood, president. The scientific program was continued as follows:

James T. Watkins, San Francisco, "The Hip—Bone Tumors and Dislocations." Discussion by R. A. Bowdle, T. O. Burger, and E. L. Gilcreest. Discussion closed by Watkins.

George Warren Pierce, San Francisco, "Advances in Plastic Surgery." Discussion by T. O. Burger, L. Eloesser, W. W. Washburn, E. L. Gilcreest, and C. E. Savier. Discussion closed by Pierce.

Ludwig A. Emge and H. Lissner, San Francisco, read their papers as a symposium. Emge's was entitled, "The Menopause and Its Treatment." Lissner's was entitled, "The Influence of the Thyroid, Pituitary and Adrenal Glands on the Functions of the Ovary." Illustrated. These papers were discussed by J. F. Percy, E. H. Falconer, J. E. Harbinson, E. L. Gilcreest, S. K. Morrison, J. A. Fuller, Horace J. Brown, and W. F. Cheney. Discussion closed by Emge and Lissner.

The paper of Henry Albert of Reno entitled, "Hay Fever in Nevada," was read by title, Albert being absent.

James F. Percy, Los Angeles, "The Cautey Treatment of Carcinoma Above the Clavicle." Discussion by W. W. Washburn and E. L. Gilcreest. Discussion closed by Percy.

Howard C. Naffziger, San Francisco, "The Treatment of Spinal Cord Injuries." Discussion by L. Eloesser, M. B. Wesson, J. F. Percy, and S. M. Sproat. Discussion closed by Naffziger.

Owing to the lateness of the hour, Frank Hinman, San Francisco, announced that he would not read his paper, but would publish it instead.

#### Business Meeting

On motion of S. K. Morrison, seconded by D. A. Turner, the minutes of the last meeting were approved without being read.

Reports of committeemen were then called for, but as none of the committeemen were present no reports were had. Piersall also being absent, his report was not read.

D. A. Turner nominated Horace J. Brown as delegate to the American Medical Association, C. E. Piersall as alternate, seconded by R. A. Bowdle. Moved, seconded and carried, and Brown and Piersall duly elected.

The election of officers being next in order of business, the president called for nominations for president. R. A. Bowdle nominated W. L. Samuels, seconded by D. A. Turner. There being no further nominations, it was moved and seconded that the faculty unanimously ballot for Samuels. Carried.

S. K. Morrison nominated R. R. Craig for first vice-president, seconded by R. A. Bowdle. Same procedure as before and Craig duly elected.

T. W. Bath nominated R. H. Riley for second vice-president, seconded by R. A. Bowdle. Same procedure as before and Riley duly elected. R. A. Bowdle nominated Horace J. Brown for secretary-treasurer, seconded by D. A. Turner. Same procedure as before and Brown duly elected.

R. A. Bowdle nominated Turner for trustee for two years, seconded by R. A. Richardson. Same procedure as before and Turner duly elected.

D. A. Turner nominated S. K. Morrison for trustee for one year, seconded by R. A. Richardson. Same procedure as before and Morrison duly elected.

In the matter of the time and place of holding the next medical meeting it was unanimously decided to leave the matter to the incoming officers.

A communication was read from the American Medical Association concerning the federal Lye Bill, the Shepard-Towner Law, the Narcotic Law, and the Chiro-



practic Bill. Moved by S. K. Morrison, seconded by D. A. Turner, that this communication be placed at the hands of the Judiciary Committee and their action accepted as the will of the Association.

D. A. Turner moved that the Association favor and work for a federal hospital to be located in Reno, seconded by R. A. Bowdle. Carried.

T. W. Bath moved that the secretary write to each one of the essayists thanking them for their participation in the program and, also, that all those who are not now honorary members of this Association be allowed as such; seconded by D. A. Turner and carried.

T. W. Bath moved that the Association pledge a donation of \$50 to the Florida sufferers, the donation to be raised by popular subscription among our members; seconded by J. T. Rees. Carried.

The following contributed to this fund: Richardson, Craig, Riley, Bowdle, Bath, Rees, Turner, A. J. Hood, Roantree, Secor, and Brown.

The chairman on necrology being absent, it was moved by R. A. Bowdle, seconded by R. H. Richardson, that the committee be instructed to prepare resolutions of respect and memorial for J. E. Pickard and A. P. Lewis, both of whom have died during the year.

There being no further business to come before the Association, the meeting was adjourned *sine die* at 5:25 p. m.

**Prevention of Rickets in Premature Infants**—Henry J. Gerstenberger and John D. Nourse, Cleveland (Journal A. M. A.), relate their experience with attempts to prevent the occurrence of rickets in premature infants by feeding them with S. M. A. mixtures. Seventeen premature infants were treated. The most common mixtures used were the following: (a) Double Strength S. M. A. (or Concentrated Liquid S. M. A.), 2 parts; boiled water, 1 part, and boiled skim milk, 1 part. This mixture has an approximate composition of: protein, 2.1 per cent; fat, 3.6 per cent; lactose, 8.6 per cent, and ash, .44 per cent. The cod liver oil content on the average is 3.5 cc. per liter. (b) Protein S. M. A., which is an acid milk (lactic and citric), having an approximate analysis of: protein, 3.5 per cent; fat, 2.2 per cent; lactose, 2.8 per cent; ash, 0.6 per cent, and acidity, pH 4.6. The cod liver oil content on the average is 2.2 cc. per liter. The citric acid is put in the milk in the form of lemon juice, 20 cc. to the liter, and the lactic acid is produced by bacterial fermentation. It is evident from the results obtained by the authors that rickets can be prevented and cured in premature infants. The amount of cod liver oil required is small, as 3.5 cc. per liter of S. M. A. or S. M. A. skim milk mixtures prevented rickets in every case, and 2.2 cc. of cod liver oil per liter of Protein S. M. A. was effective in five out of seven cases. The two that developed rickets on this combination lost it on the same mixture even though they continued to gain in weight, but at a somewhat slower speed. The average daily intake of cod liver oil for the group was 1.76 cc. It was observed that the daily intake of 8 cc. of cod liver oil for one week produced healing rickets in seven weeks and a completely calcified bone in nine, showing again the small amount of cod liver oil required to initiate and for some time to keep in action the calcification process. In preventing rickets in premature infants, cod liver oil should be administered as soon as food is consumed. Excessively rapid and great gain in weight should not be encouraged. The food should contain a higher mineral and protein content than does human milk, and it is suggested that if human milk is used it be supplemented with boiled skim milk.

As a people, we Americans are extremists. Everything we do is exalted to the nth power. Every time we let loose the wonderful energy, enthusiasm, and vitality of our relatively young nation, we indulge in an emotional episode. We orate, investigate, and legislate. We run the gamut of publicity; we exhibit and prohibit; we announce and denounce; we revel in velocity and strenuousness; as a nation we live on excitement.—Nation's Health.

To the longer life and the worse, the shorter life, if it is better, ought by all means to be preferred.—Epictetus.

## READERS' FORUM

San Francisco, November 12, 1926.

*Dear Editor*—In the last issue of the Journal, I see that the editorial as well as the "Month with the Editor" are not in favor with the public health insurance system in England. You are quoting also that a group of English physicians formed an alliance against the whole system. Yet to my information it came that the "Royal Commission of England" had a panel system at a public trial at the end of last year or beginning of this year, and as far as I know there was *not* a man or a group of men who came out publicly against the system.

Also all the notes of the last issue are having an outlook purely from a physician's standpoint of view. I believe if we physicians are to be the keepers of the health of the public, we have to have an outlook also from the public standpoint.

We must not forget that about half of our adult population is suffering from venereal diseases alone, and that about 75 per cent of our women are operated for the correction of pathology of the above-mentioned disease.

This question of public health insurance is to be studied—and studied again.

We must not forget that the physicians in England were never asked whether they would approve the panel system or not. They just simply passed the law and the physicians had to make the best of it.

Perhaps it would be good for us to benefit by other peoples experiences and look into the matter carefully.

Trusting and hoping that none will be offended by these few remarks, I am sincerely always at the service of the Journal.

B. S. HERMAN, M.D.

San Diego, November 12, 1926.

*Dear Editor*—You have been kind enough to make mention of our lectures in a previous issue of CALIFORNIA AND WESTERN MEDICINE, but it is now necessary that we make some change, as the schedule has changed. Dr. William McKim Marriott, dean of Washington University Medical School, will give the lectures in San Diego during the month of January, instead of Dr. Philip Shaffer, who is ill.

Doctor Marriott's subjects are going to include diabetes, acidosis, alkalosis, toxemia of pregnancy, the chemical changes in the body during intestinal obstruction and rational therapy for the same, the respiratory exchange and certain aspects of diseases of the heart. The subjects are all going to be built up upon the phenomena of the chemical changes in the body in these various clinical states.

I am asking that you give this publicity, for the reason that Doctor Marriott is so well known and comes out to this section of the country so seldom that it is probable that a great many men from Los Angeles and San Francisco would like to have word in advance about the lectures. All out-of-town doctors are invited to come to San Diego and attend the lectures. If you would ask your assistant editor to give this some prominent place in your next edition of the Journal, I would appreciate it very much.

DAVID R. HIGBEE, M.D.

San Diego, November 8, 1926.

*Dear Doctor Musgrave*—Your article in the A. M. A. Bulletin, "Saving the Expectant Mother," I trust will meet with the hearty approval and nation-wide co-operation that it so manifestly deserves. This all-important measure is presented so succinctly that we would hope to enlist your good offices in another chapter on this same subject. I refer to the general health, vigor and preservation of the mothers and would-be mothers of our future progeny. Any impairment here, it is needless to say, spells lack of physical, mental and moral stamina, and this among those upon whom we must largely depend for our future national supremacy.

To bring this home to our profession, first we must consider that less than one in fifty (yes, much less) obstet-

rical cases are attended by the trained specialist (the obstetrician). The same might be said of gynecological cases (the gynecologist), which means that the other forty-nine cases are taken over by practitioners, pseudogynecologists, who do not take the time (even if competent) necessary for the essential pre- and after-care of the many, so ruthlessly forced into surgery. Again, how about our Class A hospitals? In many the department of gynecology is entirely ignored (no attending gynecologists), though the often faultily diagnosed cases that are railroaded through surgery are not few, but many. Unfortunately the interns get their clinical training through this type of surgery, and thus starts an endless chain of indifferent if not reprehensible gynecological surgery.

"It isn't enough for doctors to condemn the faulty rendering of a needed service. Through our county medical societies we should initiate and promote a sane, constructive program, to be executed under our own leadership," which should embrace publicity and educational propaganda as seemeth wise, etc.

I know you will feel the same as I do about this matter and will help bring about the much needed reform.

Nothing in the above should be construed as opposing legitimate gynecological surgery. When properly diagnosed—with due regard for remote as well as immediate results—gynecological surgery is, of course, as necessary as any other and should be done.

H. P. NEWMAN, M. D.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

By C. B. PINKHAM, *Secretary*

At the annual meeting of the Board of Medical Examiners, dates of meetings and oral examinations for 1927 were established, as follows: January 31 to February 3, Los Angeles; May 16 to May 19 (written examinations only), Los Angeles; June 27 to June 30, San Francisco; October 17 to October 20, Sacramento. Oral examinations (held simultaneously in San Francisco and Los Angeles): March 9, June 8, September 7, and December 7.

Another alleged victim of the beauty specialist was claimed when Mrs. Sally Lytton of Los Angeles recently died following the application of a Los Angeles manufactured face peel, which according to reports was composed of a large percentage of corrosive sublimate, although the paper carton containing the bottle of "face bleach" made no mention that its contents were poisonous, and the preparation was on sale at various representative drug stores.

James A. Belyea, a well-known Glendale physician and surgeon, recently arrested on a charge of cruelty to animals based on the alleged mistreatment of nineteen young goats on the Glahn Goat Farm, was ordered held over today in a court pending the return of a material witness for the state, according to the Glendale Press of October 27, 1926.

The license of Herbert E. Bogue, M. D., revoked by the Board of Medical Examiners March 11, 1926, on the basis of his narcotic activities, was restored October 20, 1926, after the board considered not only the age of the applicant, but also a petition signed by practically all the doctors of Sawtelle, Ocean Park, etc. The board placed Doctor Bogue on five years' probation, during which time he shall not apply for nor receive an alcohol permit or a federal narcotic permit.

H. H. Calkins, a recent arrival in Long Beach, who is reported to drive an automobile with an Indiana registration number, was recently arrested on a charge of violation of the Medical Practice Act.

Officers of the Board of Medical Examiners re-elected at the annual meeting held in Sacramento, October 19, are as follows: President, Percy T. Phillips, M. D.; vice-president, Harry V. Brown, M. D.; secretary-treasurer, Charles B. Pinkham, M. D.

Associated Press dispatch dated Sacramento, November 5, relates the appointment of C. F. Redmond, D. C., Los Angeles, and Claude L. Houck, D. C., of San Francisco as members of the State Board of Chiropractic Ex-

aminers to succeed Tait and McFarlane, whose terms have expired. J. K. Gilkerson, D. C., of Glendale is also reported to have resigned as a member of said board.

S. C. Drollinger recently was sentenced to pay a fine of \$500 or serve one hundred days in the city jail of Los Angeles on a charge of violation of the Medical Practice Act, said sentence being thereupon suspended for a period of two years on condition that the defendant does not violate the Medical Practice Act during the term of his probation. According to a report of our special agent, Drollinger related that he did not know whether he was registered in California or not, stating, however, that he was licensed in Illinois, Michigan, and Ohio.

Florida is still having trouble with diploma mill activities and issuance of fraudulent licenses to practice in that state, according to recent reports which relate the arrest of Joseph M. De Gaetani on a charge of practicing on a license alleged to have been "purchased from Dr. George A. Muench, formerly secretary of the Eclectic Board of Medical Examiners, who also was recently arrested as the alleged head of the diploma mill."

According to the Wilmington, California, Journal of October 15, 1926, A. C. Foy, a Long Beach chiropractor, was arrested following an automobile collision. "Records at the police station revealed the fact that Mr. Foy was driving his car when in an intoxicated condition. . . . He was brought to the police station, a charge placed against him of violation of the California Vehicle Act and detained until he was sobered up sufficiently to care for himself."

The license of David (Oscar) Franklin to practice as a physician and surgeon in the state of California was revoked by the Board of Medical Examiners, October 19, 1926, it being alleged that he was practicing under the credentials of David Franklin, who died in New York State in 1903. (Previous mention in CALIFORNIA AND WESTERN MEDICINE, "News Items," September and November, 1926.)

W. Roy Graham, Alhambra chiropractor, was sentenced to from 17 to 170 years in San Quentin by Superior Judge Burnell yesterday. Graham was convicted on seventeen counts of grand larceny and embezzlement. . . . (Previous mention made in CALIFORNIA AND WESTERN MEDICINE of February, June and October, 1926.)

According to recent press dispatches, F. F. Gundrum, M. D., and Robert Peers, M. D., have been reappointed members of the State Board of Health.

The license of Frank C. Hart, M. D., to practice as a physician and surgeon in California was revoked by the Board of Medical Examiners, October 19, 1926, following a formal hearing based on charges of conviction of a crime involving moral turpitude, the record showing that Doctor Hart was convicted of violation of the Mann Act in Portland, Oregon, and the conviction was recently confirmed by the United States Supreme Court.

The license of Edwin V. Heaton to practice as a physician and surgeon in California was revoked by the Board of Medical Examiners, October 19, 1926, based upon his conviction of violation of the Federal Statutes re narcotics.

Charged with driving an automobile while intoxicated, after his car had collided with a car driven by N. C. Toll, 1401 West Elm Street, Stockton, Dr. L. D. Hines of Lodi was released from the Sacramento county jail Saturday night after posting a \$500 bond insuring his appearance against the charges (Sacramento Bee, October 18, 1926). The records of the Board of Medical Examiners do not show the name of Dr. L. D. Hines.

The Third District Court of Appeal has denied a rehearing to T. Wah Hing, local Chinese herb doctor, who was convicted in the Sacramento County Superior Court of practicing medicine without a license. The Appellate Court recently upheld Hing's conviction.—Sacramento Bee, October 11, 1926.

The license of Lewis T. A. Hotten (formerly Hotten-dorf) to practice as a physician and surgeon in California was revoked by the Board of Medical Examiners, October 19, 1926, based upon his conviction of violation of the Harrison Narcotic Act and followed by his in-



carceration in the federal penitentiary at Leavenworth, Kansas.

The Board of Medical Examiners on October 19, 1926, found Harrison B. Hulse, M.D., guilty, based on the record of his conviction of violation of the State Poison Law re Narcotics and placed him on probation for five years, during which time he shall not ask for nor receive a Federal Alcohol or Narcotic Permit.

According to the Long Beach Sun of October 14, 1926, H. A. Kettle, a chiropractor, was recently reported to have been found guilty and fined \$25 for failure to report a contagious disease.

Dr. William I. Kinsley, charged with having performed an illegal operation on a young woman, is in the county jail in default of \$5000 bail, that amount of bond having been fixed yesterday by Justice Griffin when Kinsley was arraigned on the felony charge. Kinsley had obtained his freedom a few hours previously by making bond of \$1500 for his appearance to answer another charge, that of improper conduct with a young woman. . . . The past few months have been hectic ones for the man who at one time was a candidate for the Mayor's chair in this city and who some months ago announced himself as an aspirant for the post of California's Governor. . . .—San Diego Union, October 22, 1926.

Abraham W. Lair, self-styled doctor, recently paid a \$200 fine in Municipal Judge Richardson's Court in Los Angeles, based on a charge of practicing medicine without a license. It is related that, although he denied practicing surgery, he admitted to the court that he had in his possession a large quantity of surgical instruments and is alleged to have stated that "he understood that the State Medical Board would allow him to practice in California anyway since he could not qualify for a license," further relating that he had practiced in Alabama, Illinois, Mississippi, Oklahoma, and Texas, although he was never licensed anywhere.

The application of M. T. Larkin for probation was denied recently in San Diego, whereupon said defendant was sentenced to pay a fine of \$100 or serve thirty days in the county jail. (Previous mention in "News Items" of June and December, 1925; July, September, and November, 1926.)

H. A. McClelland, Turlock chiropractor, was found not guilty of issuing a worthless check of \$10 to Carl Salher of Modesto by a jury in Superior Judge L. W. Fulkert's court last night. The jury returned a verdict that McClelland was not guilty of passing the check at the time by reason of his insanity. McClelland was sent to Letterman General Hospital following his arrest and held under observation. He is said to have fully recovered his mentality.—San Francisco Examiner, October 31, 1926.

According to a press dispatch dated Fresno, November 5, G. Carl H. McPheeters, M.D., prominent Fresno physician, faces a charge of sending objectionable matter through the mail, as a result of his indictment by the United States Grand Jury in session here yesterday and today. Details of the indictment were kept secret (San Francisco Examiner, November 6, 1926). Previously mentioned in "News Items," September and October, 1926.

A recent attempt was made by an individual posing as Alma Stevens Pennington, M.D., a reputable physician and surgeon in San Francisco, to obtain a Michigan license by fraud. Thorough investigation discloses that the photograph of the individual seeking registration in Michigan is said to be that of Agnes Martin, a nurse formerly connected with the State Hospital near Rockville, Illinois, which individual is alleged to have tried the same scheme on the Illinois authorities in 1922.

Howard L. Moffat, M.D., of Los Angeles was found guilty by the Board of Medical Examiners, October 19, 1926, in connection with a charge of violation of the State Poison Act re Narcotics and penalty was deferred until the next regular meeting in Los Angeles. (Previous mention in CALIFORNIA AND WESTERN MEDICINE, "News Items," August, September, and November, 1926.)

Dr. B. B. Montgomery, 69-year-old physician charged with violation of the State Poison Act, waived preliminary hearing yesterday before Municipal Judge Ballard

and declared he would plead guilty in Superior Court. Bail was set at \$2500.—Illustrated Daily News, Los Angeles, October 26, 1926.

The petition of Arthur Barris Nelson for the restoration of his license revoked July 13, 1926, was denied at the annual meeting of the Board of Medical Examiners held in Sacramento, October 20, 1926.

Dr. A. M. Pond, who had his hearing in Judge Crane's court last Tuesday afternoon, was held to the Superior Court. His bond was fixed at \$200. Several witnesses testified that Pond was very much under the influence of liquor and was unable to guide his car properly. . . .—Upland News, October 29, 1926.

Pleading guilty on four counts of selling liquor, Poo On, Modesto Chinese herbist, was fined \$300 and sentenced to eighteen months in jail by Superior Judge J. C. Needham Friday morning. The fine was paid, but the jail sentence was suspended for sixty days on condition that Poo On leave the United States and go to China. This he agreed to do. Poo On still has three charges against him. Two of these are for practicing medicine without a license, while the other is for having a concealed weapon while supposedly an alien. . . . (Modesto News Herald, October 16, 1926). According to the Modesto Herald of December 30, 1919, Poo On and B. T. Gum, Chinese herb doctors of Modesto, were arrested for traffic in narcotics. In 1920 he is reported to have been convicted of violation of the Medical Practice Act, the case being recorded in Volume 33, California Appellate Decisions, page 110.

J. Otway Puryear, whose application for a license to practice in California was refused in 1924 based upon his reported conviction in Indiana in 1921 and incarceration at Leavenworth, was reported to have recently pleaded guilty in Los Angeles on a charge of violation of the Medical Practice Act and paid a fine of \$200. It is further reported that Doctor Puryear pleaded guilty to a charge of violation of the State Poison Act.

Embezzlement charges against Dr. William J. Ryan were dismissed by Judge Stephen G. Long in Municipal Court yesterday after a money settlement had been made by the defendant with relatives of Mrs. Adelaide McLaren, who is under prison sentence for killing her husband Forest McLaren. . . . (Long Beach Sun, October 12, 1926). Previous mention, "News Items," November, 1926.

Newton B. Siler, M.D., was found guilty by the Board of Medical Examiners October 19, 1926, based on the record of his violation of the State Poison Law re Narcotics, and the penalty was deferred until the next regular meeting of the Board in Los Angeles.

C. R. Spencer, alleged to have been posing as a physician for some time, was reported to have been scheduled to appear before Municipal Judge Ballard of Los Angeles for preliminary examination on a charge of performing an illegal operation. (Previous mention, "News Items," June and November, 1926.)

"Dr." E. L. Swick was bound over to the Superior Court of San Luis Obispo on charges of violation of the Medical Practice Act, according to the Atascadero News of October 29, 1926.

The license of O. E. Werner, M.D., to practice as a physician and surgeon in the state of California was revoked by the Board of Medical Examiners October 19, 1926, following his conviction and incarceration in Wisconsin.

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To draw an exact line between official public health work and the private practice of medicine is likely to prove a more delicate and difficult task which can be accomplished only by the exercise of common sense and a spirit of fair dealing with the rights, duties and prerogatives of those concerned, including the general public.—Matthias Nicoll, Jr., New York State J. Med.

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President Calvin Coolidge, in Bruce Barton's interview, indorses marriage unequivocally. What other visionary project will this reckless radical advocate next?—Emporia Gazette.

## MEDICAL AND HEALTH AGENCY NEWS



Lucy M. T. Wanzer was the guest of honor at a dinner given by the Women Physicians' Club of San Francisco at the Clift Hotel, November 2. The occasion was the celebration of the fiftieth anniversary of Doctor Wanzer in the practice of medicine. Ninety women physicians from San Francisco and neighboring cities were present. Louise B. Deal, president of the club, introduced Emma Sutro Merritt, who acted as toastmistress. Doctor Merritt told of the early struggles of Doctor Wanzer, who was not only self-supporting from an early age, but was the mainstay of a large family. While acting as breadwinner in the capacity of seamstress, postmistress, and school teacher, she went on with her education and steadfastly adhered to her purpose of fitting herself to study medicine. She was finally admitted to Toland Medical School, and after many vicissitudes was awarded her degree on November 1, 1876. She was the first woman physician to graduate from the University of California. The difficulties encountered in establishing a practice and securing hospital accommodations were overcome by a combination of hard work, strict attention to business, and rigid adherence to the ideals of her profession. Doctor Wanzer's part in the founding and development of the Children's Hospital was referred to by Doctor Merritt, and several of the other speakers. Margaret Mahoney read a newspaper account of the graduating exercises of the Medical School as recorded by the *Alta California* of November 2, 1876, in which reference was made to the surprising fact that there was one "lady" among the graduates.

Expressions of congratulation and appreciation were conveyed to Doctor Wanzer by Emma K. Willits, representing the Children's Hospital, Mariana Bertola repre-

senting the State Federation of Women's Clubs, Alice Maxwell representing the University of California, Mary Layman representing Stanford University, and Kate Van Norden.

Edna Barney, secretary, read many letters and telegrams of congratulation, among which were one from Grace Kimball, president of the National Women's Medical Association, Emmet Rixford representing the San Francisco County Medical Society, William E. Musgrave, Lucy Sprague, and numerous others.

**California Northern District Medical Society** (John L. Lawson, secretary)—Report of the forty-first semi-annual meeting of the California Northern District Medical Society held in Woodland, California, October 26, 1926.

The morning session was devoted to clinics in the various departments of the Woodland Clinic in which all staff members participated.

Lunch was served at the Yolo Fliers Club, with the staff of the Woodland Clinic acting as hosts. About sixty places were occupied.

The afternoon session was called to order by J. O. Ciapella of Chico, president. It was well attended, there being between sixty-five and seventy members and guests present.

The scientific program was opened by Dr. Stanley Stillman of San Francisco, who spoke informally on "Experiences with the Female Breast," discussing chronic mastitis, carcinoma of the breast, adenomata, and other allied conditions. Discussion was opened by Fred R. Fairchild and continued by J. B. Harris, after which a general informal discussion was held.

The second paper was read by Walter M. Dickie, who spoke upon "Preventable Diseases from the Standpoint of the State Board of Health." This paper was discussed by H. D. Lawhead, Mrs. Rozzie Carrow, Smith McMullin, W. P. Lucas, Rooney, Poole, Bates, Beattie, and Gundrum.

F. H. Rodenbaugh, who was to have presented a paper on "Injuries and Anomalies of the Lumbar Spine," was unable to be present.

The final paper was given by William Palmer Lucas, who presented several case reports of chronic nutritional diseases in infants and children in a very able manner. Discussion was opened by E. S. Babcock and continued by J. Edward Harbinson.

Following the reading of these papers the annual business meeting was held, and the following physicians were elected to membership: Charles I. Titus, Sacramento; Frederick W. Dider, Wheatland; C. E. Reed, Redding.

The following officers were unanimously elected: John D. Lawson, Woodland, president; Dan Hazen Moulton, Chico, vice-president; Albert K. Dunlap, Sacramento, secretary; Walter E. Bates, Davis, treasurer. Drs. J. B. Harris, R. A. Peers, D. H. Moulton, Dewey R. Powell, and E. Eric Larson, Board of Censors.

A committee consisting of H. D. Lawhead, W. E. Bates, and J. B. Harris was appointed to draft a resolution of respect for the passing of two of the charter members, viz., Drs. J. H. Parkinson and O. Stansbury.

A rising vote of thanks was tendered to the Woodland Clinic and the officers of the society for the excellent meeting.

**Tribute to the Memory of Dr. O. Stansbury**—If we could know what death and its consequences are, possibly the parting from our beloved comrades would not be embittered by so much sadness.

But since we cannot know beyond the grave, we bow meekly to the dispensation of a just and all-wise Providence and find our sorrow over the death of our esteemed member, Dr. O. Stansbury, sweetened by the memory of his unpretentious, yet noble life.

We remember his personal sacrifices—his lifelong devotion, first to his family; next to the prevention and relief of the suffering of his multitudes of grateful patients whom he loved to serve and who loved his service.

Throughout his fifty-three years of active practice, we know his ethical support not only of his chosen profession—to which he was always faithful—but of church, of



school, and of every movement which meant the betterment of his profession and his community.

What a heritage thus graciously bestowed! What greater monument could human desire than the record of a life work so well done?

To Doctor Stansbury's family we tender the affectionate sympathy of every member of our society, to whom he was always a genial friend and by whom he is affectionately remembered.

(Signed) H. D. LAWHEAD  
W. E. BATES  
J. B. HARRIS

Committee of California Northern District  
Medical Society.

**In Appreciation of Dr. James H. Parkinson**—Again the cold hand of death has taken from us an esteemed and very active member—Dr. James H. Parkinson of Sacramento. Doctor Parkinson's death is an irreparable loss not only to our district society, but to general medicine and to all the medical activities of the state, for he was a conspicuous figure both officially and in general practice. He stood among our best as practitioner and consultant, and had filled most creditably the important offices in the various medical organizations of the state. And yet he never sought personal aggrandizement, but stood for the highest interests of his profession regardless of consequences to himself.

He was a high type Christian gentleman, and in his relation to all moral, social, and municipal affairs of his community, as well as to medicine, he was zealous for the right as he saw it, almost to the point of austerity.

Though Doctor Parkinson is gone we remember and cherish his counsels, his example, and his influence for good, and extend to his family our affectionate sympathy.

(Signed) H. D. LAWHEAD  
W. E. BATES  
J. B. HARRIS

Committee of California Northern District  
Medical Society.



Doctor Rist, who was recently a guest of the American Tuberculosis Association and a speaker at their annual meeting, is well known in the United States, as the following citation which accompanied his Distinguished Service Medal will attest:

Edouard Rist, Major Medical Service, French Army, D. S. M. (Army). As an eminent scientist, by his untiring zeal, devotion and energy he promoted the efficient

treatment of the American sick and wounded. In this important research work he co-operated with the Medical Service of the American Expeditionary Forces in the fullest measure of devotion to duty. To him is due much credit for the arresting of the ravages of disease and injuries among our forces. His valuable research efforts in the domain of preventive medicine and wound bacteriology resulted in the saving of many lives among our wounded soldiers. He has rendered services of signal worth.

He is now chief physician of the Laennec Hospital, tuberculosis department, and Leon-Bourgeois Dispensary in Paris, where he has developed a center for tuberculosis study and research. He is a product of the University School of Medicine at the Pasteur Institute, subsequently occupying an important position in Egypt.

This is his fourth visit to the United States. In 1919 he was invited to accept the chair of medicine at the University of Michigan, but declined. In 1917 he occupied a desk in Surgeon-General Gorgas' office at Washington as a member of the French scientific mission to America.

Doctor Rist came to California as the guest of the California Tuberculosis Association. Special meetings were held for him in Oakland and San Francisco and Los Angeles.

Some 125 members of the Academy of Medicine attended a reception and banquet given by the organization at the Palace Hotel on October 22, in Doctor Rist's honor.

President Ophuls of the academy introduced the speaker as one of the most distinguished authorities on tuberculosis in the world.

Doctor Rist is not only a great physician, but a delightful and charming guest.

In last month's *Medical and Health Agency News* we said that "most of the better class sanitariums for tuberculosis patients are listed in our advertising space, to their advantage, as well as advantage to doctors in other states who are constantly referring patients to institutions in California." This is true, but through a clerical error the *Canyon Sanatorium* at Redwood City was omitted from the sanitariums so listed, although, as our readers know, they have for a long time carried a very attractive full-page announcement in every issue of our magazine, as they are continuing to do.

The Park Sanitarium (San Francisco), an accredited institution for the care of the mentally ill, has improved their facilities by the addition of a hydropathic annex and a commodious roof-garden and solarium.

Some of the points made by Boris Herman in his recent talk before the Public Health Section of the Commonwealth Club were that patients were adopting all kinds of means to reduce hospital and medical costs to the minimum, or to in some way assure themselves that they would be cared for in case of illness, without impossible outlay. He mentioned clinics, lodges, hospital associations, insurance, quack remedies, and beating their bills. He discussed experience with state insurance in Germany, England and Holland, where he said that a new system was about to be instituted, available only to people of moderate or small incomes, the patient to select his own doctor. An idea he expressed was that something like this was bound to come, and that doctors and medical people should be on the ground floor, ready to see that it was carried out as it should be. He also brought out the value to a community from the public health standpoint in having medical attention available for those who need it, many patients hesitating to call in a doctor when "a stitch in time would save nine."

During the fiscal year July 1, 1924, to June 30, 1925, 9765 patients were accepted for treatment at the University of California hospital clinic. During the year 1925 to 1926 this total increased to 10,166. The total number making application for treatment was 10,842 and 12,409 for the two years, respectively.

This raises the total number of patients who have been

treated since the founding of the clinic, thirteen years ago, to approximately 140,000.—University of California Clip Sheet.

Volume I, Number 1, "Hospital News," published by the Santa Barbara Cottage Hospital, contains much well-presented information of value to all persons interested in hospital and medical work.

Among the several brief articles and carefully culled news items is one outlining a series of popular health lectures to be given *at the hospital* by members of the staff. The titles of the lectures include such subjects as: X-ray and Its Uses; Radium and Its Uses; The Control of Cancer; Dangers of Earache; Why Have a Tonsil Operation? "Colds"; Styles in Diet; Cancer of the Stomach; Plumbing of the Intestinal Tract and Its Harm; A Normal Gastrointestinal Tract; Ulcers of the Stomach; Our Eyes and What We Should Know About Them; Heart Troubles and Their Causes; Treatment of Heart Troubles; High Blood Pressure and Hard Arteries; Symptoms of Kidney Diseases; Dangers of Ruptures; Value of Periodic Medical Examinations; Vacations and the Doctor; First Aid Everyone Should Know.

Elliott P. Joslin of Boston addressed the San Diego County Medical Society November 18, at Casa de Manana, La Jolla. Subject: "The Outlook for the Diabetic." Courtesy of the Scripps Metabolic Clinic, La Jolla.

St. Joseph's Hospital, San Francisco, considered "Cancer Progress" at the staff meeting held November 10. Alton R. Kilgore opened with "Earliest Signs of Cancer," saying in part:

"Since cancer is apparently an accident of cell growth and reproduction by which one cell or group of cells are lost to control and reproduce a mass of similar wild cells, the earliest sign of cancer is a 'lump'—a lump of wild cells. If this lump is on the surface of the body, where it can be seen or felt early, the chances of its discovery in time for cure by radical removal or destruction are excellent; therefore, the lump in the breast (usually painless at first), the wart (lump) on the lip, the hard ulcer (lump) on the tongue or in the mouth—all are signs of possible trouble which everyone should know.

"When the lump is in an internal organ, it cannot be seen or felt early and other signs must be looked for. In the uterus, abrasion of the surface of the growth and consequent bleeding or foul discharge are the commonest early symptoms. Similarly, in the bowel, bleeding may be the first indication, though the irritation of the presence of a cancerous lump may cause obstinate constipation or diarrhea.

"If we may form a judgment from the trend of knowledge acquired by clinical observation and research during the past generation or more, cancer is apparently not a germ disease, i. e., the accident of a cell breaking loose from control in its relation with the rest of the body is not caused by an infecting organism. If this be true, no serum for the cure of cancer may be expected. It would be far better if the hope of a serum cure could be abandoned by the community, at least until our knowledge radically changes, because every newly announced serum means delay in securing adequate surgical treatment for some early cases."

W. E. Chamberlain spoke on "X-ray and Radium in Uterine Carcinoma," showing a favorable outlook with a proper technique. Ernst Gehrtz demonstrated "Rectal Cancer Cases" with specimens and patients. L. Crow and J. M. Stowell stressed radiation in cancers.

Case reports were presented by M. B. Ryer, William Quinn, G. E. Chapman, and Samuel Barmak. Sister Agnes and Dr. Roy Parkinson discussed "Nurses' Bedside Clinics" and C. E. French "Preoperative Skin Antisepsis."

On December 8 Emmet Rixford will speak on "A Trip to some European Clinics," based on his last tour of surgical advances.

At the last quarterly banquet and meeting of the Mount Zion Hospital staff held at the Concordia Club,

a short discussion on x-ray therapy was presented by Lloyd Bryan. Some of the points brought out in this paper were:

Treatment by x-ray is most successful with benign lesions. Fibroids respond very well and should be given roentgen therapy, unless they are extremely large, where there is an inflammatory process of the adnexa or cystic ovaries, where the possibility of future pregnancy is important and the fibroid can be removed without removing the uterus.

Thyroid can be treated as well, if not better, than by surgery with the exception of the large colloid and adenomatous goiters, which are definitely surgical.

Skin conditions, as eczema, psoriasis, acne, keloids, and carbuncles are benefited greatly by x-ray, except that the effect in many of these is temporary and cannot be repeated too often on account of skin reactions.

X-ray to date is the only promising treatment for leukemias, Hodgkin's and lymphosarcoma. Although these patients are not cured, their lives are often prolonged and they may be made comfortable for many years.

Light doses of x-ray may relieve an acute iritis within twenty-four hours. Tuberculosis glands and enlarged bronchial root glands are frequently helped. An acute suppression of urine may be relieved by x-ray easier than by a decapsulation. In tonsils radiation is second choice to surgery. It tends to prevent recurrence of lymphoid tissue on postpharyngeal wall.

In carcinoma, surgery is the method of choice. Incomplete removal, followed up by x-ray, is advisable where complete removal is impossible.

X-ray is of no benefit in carcinoma of the stomach and intestine; no better than surgery in the treatment of primary bone neoplasm, and of questionable value in the treatment of carcinoma of the uterus. It is of decided benefit in the treatment of carcinoma of the ovaries.

It is better than surgery in the treatment of superficial malignancies of the face.

In breast carcinomas statistics of Soiland, Schmitz, Phabler, Widmer, show five-year cures by combined surgical and x-ray treatment of 36, 42, and 46 per cent, as compared with 4.5 per cent of five-year cures of surgery alone reported by Ewing.

Doederleine's clinic gives figures of 46 per cent for cases without glands and 5 per cent with glands when treated by surgery, as compared with 80 and 36 per cent when treated by the combined method.

As to the time and amount of treatment, there should be constant co-operation and consultation between the surgeon and roentgenologist preferably by seeing the patient together.

Discussion followed: Harold Brunn reported some bad recurrences in carcinoma of the breast. Recurrences were more frequent where x-ray had been given immediately before operation. Does not advise x-ray treatment until recurrences have appeared. Had very good results with carcinoma of the cervix. The question of whether to operate after lesion is cleaned up is still an open one. Best results are with leukemias and Hodgkin's.

Joseph Sampson reported good results with x-ray treatment of enlarged thymus. Adolph Nahman reported a case of lymphatic leukemia, whose blood count came down from 160,000 to 50,000 after six treatments.

Lloyd Bryan said Carter Wood advises frequent small doses with x-ray after operation. Big doses may break down the lymphocytic carrier.

Bone metastases are often stopped and patients given a few more years of active comfortable life. X-ray does not produce a carcinoma, but it may hasten recurrence, breaking down the barrier by massive doses. No good results are found in treating carcinoma of the lung when the pleura is involved.

Adenomas of the thyroid are not suitable for x-ray therapy. Simple hyperthyroidism responds well.

The discussion closed with a plea for a get-together of surgeon, physician, pathologist, and roentgenologist, and to have all patients brought before a committee to determine treatment.

Louis I. Breitstein opened up a discussion on the subject of pregnancy occurring after sterilization operation. He stated that the records of Mount Zion Hospital since 1912 show that forty-five women had been sterilized at



the time of Caesarean section and five of these became pregnant again at subsequent dates. The method of sterilization had been the removal of the cornual ends of the tube. In one of the women who became pregnant following this procedure, there was found at reoperation a new tube projecting from the site of the resection of the old tube. Another explanation for the occurrence of pregnancy in these sterilized women might be found in the well-known fact that the ova have powers of burrowing their way through the tissues and possibly penetrating the uterus in this manner. Breistein further mentioned the question of therapeutic abortion and felt that where the indications for this procedure were present, as for instance in early pulmonary tuberculosis, the procedure of choice was to perform a hysterotomy and partial resection of the tubes for sterilization rather than curettage.

R. K. Smith substantiated these observations, stating that in his experience also he had had cases where pregnancy had recurred despite sterilization. He compared the burying of the tube as it is done in the sterilization operation to the bone left in cases of leg amputation, showing that both have a tendency to burrow through the overlying tissues.

**The Medical Reserve Corps**—The surgeon, Ninth Corps Area, announces that Oregon is the latest state to furnish its full quota of officers of the Medical Reserve Corps, and to join the 100 per cent class. The other two states in this class are Montana, which has furnished 110 per cent, and Utah which has furnished 132 per cent. About every fourth physician in Utah is now an officer of the Medical Reserve Corps, besides which the applications of many others had to be rejected by reason of age or physical unfitness for service. Wyoming has furnished 91 per cent. The splendid record of these four states are standards which the medical profession of California and Nevada can well afford to emulate. California has so far furnished but 67 per cent of its quota, and 410 more medical officers are required. Nevada has furnished but

57 per cent, or less than half the percentage of its neighbor state of Utah. Nevada needs to furnish ten more medical officers to fill its quota.

The physicians of California and Nevada are at least undoubtedly as patriotic as that of their bordering states of Oregon and Utah. But until they have fulfilled their obligations, they appear as laggards. It does not look well for them to have numerous vacancies in their units filled through the enthusiasm and surplus patriotic enrollments of other states, as is now the case. It would be very desirable for the county medical societies of California and Nevada to take up actively the matter of filling their state quotas, and to urge upon such of their members as seem to conform to the required standards as to age and physical condition to make application for commission in the Medical Reserve Corps. The surgeon, Ninth Corps Area, Presidio of San Francisco, California, will gladly furnish the necessary blank forms and any other information desired.

**North American Physicians are Invited to Visit the Clinics of Europe Again in 1927**—In May next year a group of physicians with members of their families from the United States and Canada, under the direction of the Interstate Postgraduate Medical Association of North America, will sail from New York to visit the following leading medical centers of the Old World:

London, Edinburgh, Oslo, Stockholm, Upsala, Lund, Copenhagen, Hamburg, Leipzig, Munich, Strasbourg, Heidelberg, Frankfurt, and Paris.

This will be the third year that foreign assemblies have been conducted under the auspices of this organization.

The price of the trip will be kept as low as possible and yet furnish first-class accommodations. It will be between \$1000 and \$1100. All physicians who are in good standing in their state or provincial society may register. Further information may be obtained from the managing-director, Dr. William B. Peck, Freeport, Illinois.

## Index—California and Western Medicine Volume XXV, July to December, 1926

CALIFORNIA AND WESTERN MEDICINE has grown to a size where it is no longer possible to bind the twelve issues of one year in the same volume. Therefore, beginning with this year, there will be two volumes a year, one covering the six issues from January to June, inclusive, and the other from July to December, inclusive. Volumes will be numbered serially as heretofore, and each volume will be supplied with an index.

In preparing the index to this volume, we have followed the method of an alphabetical subject and author index combined. It is not as full perhaps as it should be, because it would take most of the time of an indexing secretary to prepare as complete an index as we would like to see. However, it is full enough so that any major subject discussed during the year, and the names of all authors, may be readily located.

An ever enlarging circle of physicians who read systematically are finding the Cumulative Index published quarterly by the A. M. A., and sold for a nominal subscription, of incalculable value. Everything published in CALIFORNIA AND WESTERN MEDICINE, as well as other worthwhile medical magazines, is completely indexed in the "Cumulative" in a most complete author and subject index. Our editorial staff use this volume constantly.—EDITOR.

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